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List of free health literature will be supplied by local Health Departments or on written request.

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## YOUR HEALTH AND YOU

BY WILLIAM H. RICHARDSON  
State Board of Health  
Raleigh, N. C.

There are many people, perhaps, who are not informed as to what their health department can do for them—what it is doing and what it will do upon request. The State Board of Health publishes an informative eight-page booklet titled: "How Your Health Department Serves You." While the publication is in condensed form, it does contain much pertinent information which the general public should have. We have referred to portions of this booklet in the past, and now pro-

pose to give you some more which, on the face of it, is beneficial to the average citizen.

Public health affords protection not only to the public in general, to parents, little children and infants, but also to the unborn baby, as well as its mother.

The health department is working toward health for mothers and babies. Public health nurses make home visits for health supervision and encourage expectant mothers to seek medical care

early in pregnancy.

Public health nurses will visit the home to teach mothers infant care. To aid in saving the lives of premature babies, special services, including transportation and hospitalization, are provided for them through the health department.

Many health departments hold well-baby clinics to provide medical supervision for infants, to give immunizations and to offer information to parents on the growth and development of the infant and pre-school child. Pre-school clinics are held in cooperation with the schools and Parent-Teacher Associations, to give booster immunizations and examine children for physical defects. The children are referred to their private physicians for medical care when indicated.

Your local health department provides public health nursing service for school children. Medical inspections are given to children referred by the teachers and public health nurses and to selected groups of other children. The children found to have physical defects are referred to their family physicians. Funds for correction of defects are available through the joint school and health departments' school health program for those families unable to pay for corrections.

When necessary, the public health nurses make home visits to urge parents to have physical defects corrected. Special programs of hookworm, nutrition, chest X-ray examination, and other health programs are offered to teachers, school children and parents by many local health departments.

The physically handicapped child may come to the health department's monthly orthopedic clinic for physically handicapped children. The physicians holding the clinic are specialists in orthopedic work.

Keeping the public informed about health is an important part of the public health program. Every member of the health department staff does health education work as he or she carries on public health duties. Many health departments employ trained public health educators who work full-

time on developing health education programs in the communities.

The health educator and other public health workers will help communities organize to work on health problems. The development of health councils, neighborhood groups, adult study groups, and community health projects are all a part of a well-rounded public health program.

The health educator and other public health workers can assist schools in developing units of study on health, aid schools with special health projects, work on programs of in-service training for teachers and provide materials and films for school groups.

Assistance is given to clubs, voluntary and official agencies and individuals in planning for health projects and programs and by providing them with materials and information on health. An effort is made to coordinate the program planning of groups to enable maximum benefits in the community health program.

The health educator and other staff members use the radio, newspapers, films, pamphlets, posters, exhibits, bulletin boards and other media to provide the public with accurate, up-to-date health information.

Keeping the official record of births and deaths is one of the basic jobs of many health departments. Birth records are important for entrance to school, for employment and on other occasions when date of birth must be established. Death certificates are necessary in the settlement of insurance and legal matters.

Certain diseases are reported to the health department by private physicians. This information enables the health department to plan immediate action to prevent communicable diseases from spreading and chart the progress of disease control.

The local health department keeps records on the services provided to individuals, families and the community.

Studies of populations, causes of death, diseases occurring in the community and studies of rates of disease and death are made use of by health departments and are also helpful to

schools, organizations and other agencies in planning long-range programs.

The public health program, just like modern medical care, must have the services of accurate laboratories. The public health laboratory services for your community may be in your local health department, or your health department may use the services of the State Board of Health.

Regular tests are made of milk supplies to safeguard the milk you buy. Public and school water supplies are tested for purity. Private approved water supplies will be tested upon request to your local health department.

Your health officer and your physician can use the public health laboratory service as an aid in diagnosis. Services for certain examinations of blood, feces, urine, sputum and other specimens are provided by the public health laboratories.

Cancer detection and diagnostic clinics are jointly sponsored by your local and state health departments, local and state medical societies and the local and state divisions of the American Cancer Society. The clinics are open to North Carolina citizens thirty-five years of age or over and citizens under thirty-five years of age who have symptoms of cancer. Ask your family physician or your local health department for information on individual examinations or for the meeting dates of the clinic nearest your community.

The State Board of Health mobile X-ray trailers are available to carry on a chest X-ray survey in counties. Certain of the local health departments are equipped to make survey films on mobile or portable units. Requests for the service must be made by your local health department.

Clinics are open to citizens desiring guidance in emotional and mental hygiene problems. Your local health department can give you information about the clinic services nearest to you.

The State Board of Health maintains a free film service to provide films, film-strips and slides on health subjects for use by health departments, clubs, schools and other organizations.

Films may be requested through your local health department or directly from the State Board of Health.

Consultation services of trained nutritionists and dietitians are available to schools, institutions and community groups from the State Board of Health upon the request of your local health department.

The Oral Hygiene Division of the State Board of Health provides dental inspections for children under twelve years of age. Dental care is given to children under twelve years of age whose parents cannot meet the cost. This service is made available periodically upon assignment from the Oral Hygiene Division.

The School-Health Coordinating Service, supported jointly by the North Carolina State Board of Health and the North Carolina Department of Public Instruction, provides services to school and health department personnel through: consultative services, field visits, in-service education, production and use of certain materials and resources in areas of health services, health instruction, school environment and physical education. This service may be requested through the local health officer or the local superintendent of schools.

Your health department gives protection against disease. The private physician and health department work together to control contagious diseases in your community. Your health department holds clinics to give immunization against whooping cough, diphtheria, smallpox and typhoid fever and also other immunizations. When a serious contagious disease occurs in a family, the public health nurse, at the request of the health officer or a private physician, will visit in your home. The nurse will teach the family how to carry out the doctor's instructions, including how to give good home nursing care, and will instruct the family in isolation precautions to protect other members of the family from catching the disease.

Your local health department maintains a register of all known cases of tuberculosis and their contacts and

holds chest X-ray clinics for studying these cases, and contacts and the public at large. Persons with tuberculosis are referred to their private physicians and, when necessary, arrangements are made for sanatorium care.

Your health department makes diagnosis of venereal disease cases and provides adequate penicillin treatment where indicated. Each case of venereal disease is carefully interviewed for source of infection and for new contacts. When cases of certain communicable diseases occur, your health department traces down the source of the diseases in order that additional cases

may be prevented.

Through education of foodhandlers and regular inspection by the sanitarian, safe methods of preparing, serving and handling food in restaurants, in meat markets, in abattoirs, and in other food handling establishments are maintained. A grade sign, indicating the relative degree of sanitation, is posted in each food handling establishment. Every citizen should look for this sign when entering a food handling establishment. Regular inspections are made of dairy farms and pasteurization plants to assure production and processing of clean, safe milk.

## NOTES AND COMMENT BY THE EDITOR

### THE PREVENTION OF DISEASE

The practice of preventive medicine is not an individual enterprise. Preventive medicine not only protects individual patients from acquiring disease but, of equal importance, sees to it that patients do not transmit their disease to the community at large. Complete health protection thus entails a dual responsibility which is more than one person or group can handle.

At this time of year, in many areas, the local public health agency appears before its elected governing body to justify proposed budgetary requests. On the average, a health officer asks for one to three dollars annually for each person residing in his assigned jurisdiction. In most cases, due to the return of federal and state tax monies through grants, only part of the funds requested comes from local taxes. This, of course, is not meant to imply a saving of local tax monies; in fact, such subsidies tend to increase the overall cost as well as allow local politicians to dodge certain responsibilities.

There is no need to reiterate the many preventive health services a public health department can perform for the community and the medical professor. There is, however, a need for medical leadership in the support

of adequate local tax appropriations to maintain necessary preventive health activities.

It is a curious paradox that two branches of the medical profession show their worth so differently. A family physician is successful by his overt demonstration of skill and acumen, while the success of a health department depends on the disease or epidemic that never manifested itself. Because the medical profession can more clearly understand such health services, it is up to them to spearhead the financial backing needed for successful official health programs.

Supporting a health department budget results in more than just environmental protection; it is also, another means for professional guidance to the health department. When the medical society believes its local health department is satisfactorily participating in the over-all health program, it should not hesitate to show its appreciation. The greatest respect and tribute that can be paid to public health personnel by organized medicine is the recognition and backing of public health activities, properly performed. It should be obvious to tax money custodians that with medical society support only where applicable, inadequacies and incompetence will stand out as clearly as efficiency. Medi-

cal society participation will promote health services that the community understands and accepts and at the same time will help to avoid duplication and waste.

As Dr. Gunnar Gundersen, President-elect of the American Medical Association, pointed out in his recent address before the American Association of Public Health Physicians, "the success of public health programs depends, to a large degree, upon the practicing physicians and other medical personnel and medical facilities in the community. A health department, unsupported by the medical profession, divorced from the community's hospitals and alienated from others in the community working toward similar goals, is a sorry thing indeed . . . . These responsibilities are civic obligations. They must be met by all citizens and especially physicians who are doctors of medicine dedicated to rendering service to humanity."

**Editorial—The Journal of the American Medical Association, January 4, 1958**

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### ACTIVITY RECOMMENDED AS FATIGUE TREATMENT

Rest is not "a universal panacea" for fatigue, even among aging persons, a New York physician said recently.

In many cases, activity is a better remedy, especially when the fatigue results from "atrophy of disuse," Dr. Theodore G. Klumpp, president of Winthrop Laboratories, Inc., said.

In the absence of specific disease as a cause of fatigue, it arises in older persons from the normal physiological processes of aging which reduce the body's endurance; from loss of incentive, motivation, and interest; from a decline of glandular activity, and from "atrophy of disuse."

Fatigue is "a normal incident of normal living," but when its pattern changes radically or it interferes with ordinary activities, it becomes a serious problem and needs medical attention, Dr. Klumpp said in the *Journal of the American Medical Association*. His article is one of a series on aging.

"For a long time, the approach to the

problem of fatigue was thought to be simple. A brief history of the patient's mode of life was obtained with one objective in mind—to cut out something.

"It made little difference how little the individual was doing—if the patient was tired, something had to go . . . if the patient did nothing more than sit in a rocking chair all day long, he was no doubt advised to stop rocking and go lie down," he said.

Now physicians know better. Following the surgeons' practice of getting patients up soon after surgery, they now prescribe physical activity.

The pattern of American life is especially designed to avoid physical activity and stress—to the point where physical exertion is virtually eliminated, the author said. Young people are able to keep in relatively good physical condition through sports and play, but, as they grow older, they need to give up these things. With the help of "labor-saving devices, now including electric golfmobiles," they begin to suffer rapidly and too early in life from atrophy of disuse.

This brings with it a loss of muscular tone and functional reserve of all parts of the body, so that the slightest added stress causes undue fatigue. Maintaining an adequate physical reserve against stress is the best preventive for such fatigue.

Fortunately some degree of fitness can be regained through a program of graded exercise at any time, except where its loss is due to advanced organic disease. The exercise should be fun for the patient and should not be drudgery. Along with the exercise, the aging patient also needs an adequate amount of sleep at night and if necessary a short nap at midday.

Undue fatigue occurs more commonly among overweight persons. In addition to the obvious diet, the doctor should prescribe some type of exercise, despite the additional "hearsay to the contrary," Dr. Klumpp said. Its greatest value lies in its stimulating effect on endocrine gland activity and in overcoming the tendency "to sleep and snooze too much—a common

counterpart of obesity."

Dr. Klumpp also noted that much fatigue in aged persons occurs because they lose their incentive and interest in life. Then the doctor must help the patient find a "new and absorbing interest."

### RESIDENCY, INTERNSHIP TRAINING INCREASES

More than 30 thousand physicians last year took graduate training either as an intern or as a resident.

According to the annual report on internships and residencies, prepared by the American Medical Association's Council on Medical Education and Hospitals, the number of medical school graduates taking further training continued to increase in 1956-57.

There were 9,893 graduates serving internships in 1956-57, an increase of 290 over 1955-56, while 23,012 were serving residencies, an increase of 1,587 over the preceding year. The training was offered by 1,372 approved hospitals.

The percentage of available internship and residency positions filled in 1956-57 remained the same as that of 1955-56. Respectively they were 83 and 81 per cent filled.

The report in the *Journal of the A.M.A.* also showed:

—During the past 10 years, there has been an increase of 6 per cent in the number of approved hospitals and an increase of 31 per cent in the number of internships offered.

—The number of interns per hospital has increased from 11.3 ten years ago to 13.9 in 1956-57.

—Federal hospitals offered 5.4 per cent of the available internships, while nonfederal governmental hospitals offered 32 per cent and nongovernmental institutions the remainder. The federal hospitals had the highest rate of filled positions, with Army hospitals having no vacancies and Public Health Service hospitals having 99 per cent filled. County and state hospitals had occupancy rates of 91 and 89 per cent respectively.

—There has been an increase in the average monthly cash stipend paid to interns. Hospitals affiliated with teach-

ing institutions raised their stipends from an average of \$87 in 1954 to \$140 in 1956, while nonaffiliated hospitals raised their stipends from an average of \$136 to \$177.

—The report listed those hospitals with the highest autopsy rates, pointing out that the autopsy rate is regarded as "an index of the scientific interest of the medical staff in medical education and in the progress of medicine." Hospitals with low rates are being urged to increase the number of autopsies performed.

—The National Intern Matching Program, which matches interns to the hospitals in which they wish to train, has matched more than 35,000 students in the last six years without an error.

—There are 17 residency review and conference committees which function as joint liaison groups of the A.M.A. Council on Medical Education and Hospitals with various specialty boards and, in certain instances, the American College of Physicians, the American College of Surgeons, and the American Academy of General Practice.

—Seven specialties accounting for more than three-fourths of all approved residencies offered were surgery, internal medicine, pathology, obstetrics-gynecology, radiology, psychiatry, and pediatrics.

### AMA ENDORSEMENT OF FLUORIDATION

On December 5, 1957, the following recommendation proposed by the Reference Committee on Hygiene, Public Health and Industrial Health, was passed by the House of Delegates of the American Medical Association.

"The Committee has carefully reviewed the special report on fluoridation of public water supplies prepared jointly by the Council on Drugs and the Council on Foods and Nutrition and transmitted as supplemental Report G, to the Board of Trustees. The two Councils are to be commended on their extensive study of the question and the excellent bibliography and tables which have been appended.

"After careful consideration of the report, printed material and testimony,

your Reference Committee is of the opinion that fluoridation of water supplies is a safe and practical method of reducing dental caries during childhood; it agrees with the conclusion of the joint committee of the above-named Council and recommends the approval of the report."

The closing paragraph of the Committee's 27 page report, which was also adopted by the American Medical Association House of Delegates is as follows:

"Fluoridation of public water supplies should be regarded as a prophylactic measure for reducing tooth decay at the community level and is applicable where the water supply contains less than the equivalent of 1 ppm (parts per million) of fluorine."

#### DRUG ADDICTION PICTURE NOT BLEAK, SAYS A.M.A. REPORT

Frightening images of American youth being preyed upon by unscrupulous dope peddlers aren't very true to life, according to an article in the Journal of the American Medical Association.

The article, first of three consecutive ones scheduled to appear in the Journal, says that while drug addiction among younger persons is a problem, it isn't as alarming as most people think it is.

The third article in the series states that recent studies have shown that "active proselytizing by drug peddlers plays a very small role in spreading addiction."

Addiction apparently spreads, adds the article, from person to person, with addicts giving drugs to the beginner as a friendly gesture.

The articles constitute the report of the A.M.A.'s Council on Mental Health in conjunction with its committee on narcotic addiction. The report was first presented to the A.M.A.'s Board of Trustees in November 1956, and was adopted by the A.M.A.'s House of Delegates last June.

Generally speaking, the council members feel that drug addiction should be viewed as an illness. They also feel there should be a movement toward

treating addicts medically rather than punitively.

The group points out that in Great Britain, where the approach to the problem is more medical than that of the U.S., addiction is considerably less in terms of percentages.

In the U.S., the report continues, "there are probably not more than 60,000 addicts . . ." And, while addiction in persons under 21 years of age has increased since World War II, the problem isn't as great as many people think it is. Only about 13 per cent of known addicts are younger than 21. Nor is the problem of adolescent addiction a new one. A similar alleged increase of drug addiction among young people followed World War I.

The council feels that while opiate addiction is undesirable, it is not nearly as evil as the public and law enforcement officers think it is.

For one thing, "opiate addiction does not cause the degree of damage to physical health that other intoxications tolerated by our society can cause."

Also, opiates don't incite addicts to commit violent crimes which they would not commit without the drugs. Opiates are quieting drugs that repress hostile urges and depress sexual drives.

Among the recommendations made in the report is one that the A.M.A. continue to study the problem and "to support reasonable proposals designed to improve the treatment and prevention of drug addiction."

Such measures might include, adds the report:

(a) Development of institutional care programs in cities and states with significant problems .

(b) Study of various means to obtain institutional care in states with small addiction loads.

(c) Development of programs for intensive postinstitutional treatment of addicts.

(d) Development of methods for commitment of addicts to institutions by civil action rather than through actions in the criminal courts.

(e) Continued support and expansion of mental health programs.

The council strongly recommended that the policy of voluntary admissions for addiction treatment be continued and extended.

The report also says that "in view of all available evidence," the establishment of clinics to supply drugs to addicts would not be a wise move.

This latter opinion should, the report adds, be subject to review from time to time as new scientific knowledge becomes available.

#### FAMILY DOCTOR MAY HELP PREVENT MENTAL ILLNESS

"Mood-altering drugs" combined with good nutrition may help prevent mentally ill patients from being committed to mental hospitals, a Michigan psychiatrist said recently.

Writing in the *Journal of the American Medical Association*, Dr. John T. Ferguson, Traverse City, Mich., said general practitioners "may well take the lead in preventive psychiatry" through the use of drugs and good nutrition and the practice of the art of medicine.

He reported on the use of various neuropharmacological agents among patients with chronic mental illness at Traverse City State Hospital. The study has been conducted for four years.

In that time the new drugs, "together with the art of medicine as practiced by family doctors," have brought about many changes in the patients and the hospital.

The number of wards for disturbed patients has been reduced from four to one and the number of open wards has been increased from three to four. The housekeeping is excellent, the nursing care has improved, and shock, sedation, and seclusion have been practically eliminated. The patients have taken a new interest in life and the atmosphere of the wards has become a happy one, although the number and type of personnel remains the same.

At the start of the program, only tranquilizers were used, but it was found that they helped only the overactive patients. Then analeptics (drugs

that increase activity) were given to the more repressed patients. Eventually combinations of these drugs were given.

They produced what may be called a "deep-change" in the patients, Dr. Ferguson said. It is a change within the patient that enables him to respond to other treatment methods and to participate in a rehabilitative program.

The combination of tranquilizers and analeptics was especially effective in confused, disoriented, and mildly overactive elderly patients, although the reasons for it are not understood, he said. The improvement does, however, give the hope that further research and newer drugs will soon make it possible for doctors to lessen, control, and "even prevent mental changes now associated with senility," Dr. Ferguson added.

Early in the program a direct parallel was noted between the physical well-being of patients receiving drugs and their rate and degree of improvement. Therefore, all medical and surgical problems of the patients were found and treated.

In addition, special diets and extra feedings high in minerals and vitamins were begun. Patients who had reached a "plateau" in improvement on drugs alone improved further when they were given supplementary diets. This was especially marked among elderly patients.

As the patients became more manageable, the attitude of the staff also changed. This brought about better understanding and more considerate treatment, which in turn benefited the patients.

In conclusion, Dr. Ferguson pointed out that the drugs by themselves or even when incorporated into a total hospital program will not empty the mental hospitals of the country. However, "by combining them with nutritional therapy, family doctors may hope to prevent commitment of mentally ill patients encountered in their home and office practices."

**HOME IS BEST PLACE TO TEACH CHILD HOW TO MAKE FRIENDS**

The best time and place for learning how to make and keep friends is in childhood and at home, according to an article in *Today's Health*.

Elizabeth B. Hurlock, Ph.D., outlined in the American Medical Association's popular health magazine some tips for parents on how they can help their children learn to make friends.

If good foundations for getting along with others are laid in the home, a child's chances for being popular are greatly increased, she said.

Some of her suggestions to parents are:

—Set a good example for social relationships in the family, since children quickly imitate patterns of behavior they observe around them.

—Supervise a child's early play with his brothers and sisters and with the neighborhood children. Show him how to get along with others and explain why a particular behavior is good or bad.

—As he grows older, discuss as a family what makes certain children popular and others unpopular. This should be kept on an impersonal level.

—Encourage him to bring his friends home and help him learn how to entertain.

—Watch for the first signs of jealousy toward a brother or sister and correct the cause before it becomes a habit.

—Play games with a child, so he can learn how. Since most contacts with other children will be in play, he must be able to play as well as they do if he is to be included in the group.

—Give him an opportunity to talk when the family is together and help him to talk about things that are interesting to others.

—Call on him for help. Children who develop the habit of helping at home rarely sit back and expect others to do all the work, nor do they grumble because they feel they are expected to do more than their share.

—Expect him to consider the interests and desires of the family. Teach him to laugh at himself. And make

sure the home is a cheerful place. Being cheerful will become a habit and this goes a long way toward making anyone popular.

Dr. Hurlock is former secretary-treasurer of the American Psychological Association's division on childhood and adolescence.

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**DIAPERS DON'T CAUSE DIAPER RASH**

In spite of its name, diaper rash is not usually caused by diapers, according to an editorial in the *Journal of the American Medical Association*.

Diaper rash is a general term for several types of skin eruptions in the "diaper region," the editorial said.

The commonest cause of a rash is the formation of ammonia by bacteria after urea is broken down. Other eruptions may be prickly heat, thrush, chafing, allergy, and various types of dermatitis.

All of these rashes are aggravated by lack of cleanliness and softening of the skin, which may occur if it remains too long. The best preventive for diaper rash is changing the diaper as soon as possible after it becomes wet or soiled. This prevents softening of the skin and the formation of ammonia.

Since plastic or rubber pants increase the likelihood of ammonia formation, their use should be limited to those "brief social occasions when prompt changing would be inconvenient," the editorial said.

Studies have shown that commercial laundering of diapers is much more effective than home laundering in removing and stopping the growth of ammonia-forming bacteria and in removing irritating detergents, the editorial said. The usual commercial process includes three initial warm and hot rinses, two soapings, bleaching, and three rinses in hot water followed by two rinses in chemicals which stop the growth of ammonia-forming bacteria.

Although commercial laundering is not essential to the prevention of diaper rash, the more a home laundering procedure is like that of commercial laundries, the better the protection, the editorial said.

Treatment of diaper rash varies according to the cause, but in any case, the diaper region should be kept dry and warm.

Preventive measures must be continued as long as diapers are worn, the editorial concluded.

#### **PHYSICIAN GIVES MEDICAL ADVICE ON FLYING**

Physicians can do a lot toward easing the fear and discomfort some people associate with flying, an Air Force doctor said recently.

Writing in a recent issue of the *Journal of the American Medical Association*, Lt. Col. Frederick S. Spiegel (MC), U. S. Air Force, Washington, D. C., listed some of the things a doctor needs to know if he is to advise his patients about traveling by air.

He pointed out that more and more people are flying each year. Last year over 25 million passengers traveled on U.S. domestic air lines. Many people have had no experience with flying and go to their doctor for advice.

Among the things the doctor should know about airline regulations is that permission must be granted by the public health officials before any person with a contagious or communicable disease may be transported across state lines, the colonel pointed out.

Diabetics requiring insulin may travel only if their insulin and syringe are kept in their hand baggage in the passenger cabin, he said.

Physicians generally agree that a woman with an uncomplicated pregnancy is not "sick" and can travel safely. However, if she wishes to fly in the very late stages of pregnancy, she must present a certificate from her physician stating that she will not deliver "for at least 72 hours," Colonel Spiegel said.

Infants less than six weeks old are not generally transported by commercial carriers unless there are extenuating circumstances. Then a pediatrician's certificate is requested, stating that the infant is healthy and physically fit to fly.

Patients recovering from recent coronary thrombotic attacks or those suf-

fering from coronary insufficiency need careful examination before being advised to fly. Anemic patients and those with certain types of respiratory difficulty also need careful checking, the author said.

"Children are only fair air travelers," the colonel said. Those under five years of age experience airsickness and ear trouble five to 10 times more frequently than adults.

The increased susceptibility to airsickness may be related to insecurity and apprehension, while the ear discomfort is associated with the difficulty of teaching children to swallow while descending in an airplane.

Airsickness in adults is no longer a major problem, but when it does occur, it is five times more frequent among women than among male passengers. As with children, this is probably due to anxiety and apprehension. Fear of airsickness hastens its development.

There are several effective remedies for those who develop airsickness. The same drugs also prevent it if taken before flight. The value of reassurance by the doctor in such cases cannot be over-emphasized, Colonel Spiegel concluded.

#### **ELDERLY PERSONS NEED TO REDUCE FOOD INTAKE**

Most aging persons do not need to alter their normal eating habits, except to decrease the amount they eat, a New York physician said recently.

Basically the nutritional requirements for the aged are the same as for younger adults. However, older persons need fewer calories to maintain their normal weight, Dr. Herbert Pollack said in the *Journal of the American Medical Association*. The article is one of a series prepared under the auspices of the A.M.A.'s committee on aging.

Dr. Pollack, associate professor of clinical medicine, New York University Postgraduate School of Medicine, said the "obesity of the elderly is not due to gourmandizing," but to eating the same amount of food they did in their younger years when their bodies needed more food.

The body needs a decreasing amount of oxygen as it ages. When this is coupled with a decreased over-all physical activity, it means that the body needs fewer calories to maintain the same weight.

Many religious rituals and certain food practices among groups of people indicate that they have long recognized the place of periodic fasting and limited diets in the prevention of overeating. Now scientific knowledge of nutrition and diet makes it possible to develop diets that are rich in the necessary nutrients but do not lead to overweight, Dr. Pollack pointed out.

In some cases special diets must be devised for aging persons with chronic diseases which sometimes influence nutritional requirements, Dr. Pollack said. For instance, patients with Parkinson's disease (paralysis agitans) sometimes have trouble feeding themselves. They may need concentrated food in liquid mixtures as between-meal supplements.

Limitation of physical activity because of heart and circulatory diseases or arthritis means there must be a compensating decrease in caloric intake, Dr. Pollack said. Otherwise weight gain is inevitable and this added weight causes a further load on the circulation and on weight-bearing joints.

In setting up a diet, the doctor must also pay attention to the "mechanical state" of the food as well as to its nutritional content since many elderly people have difficulty chewing because of tooth or mouth disorders.

Regardless of the type of patient receiving the diet, the doctor must make certain that the diet "not only is nutritionally adequate on paper but is actually consumed by the patient," Dr. Pollack said.

#### **DRIVER TRAINING WOULD LOWER INSURANCE RATES**

Probably the best way to reduce automobile insurance rates is to teach teen-agers how to drive properly.

This would increase the number of accidentless drivers which would help reduce insurance costs, a New York

high school teacher has said.

Writing in **Today's Health**, the American Medical Association's popular health magazine, David Star, Floral Park, N. Y., said training would also help reduce the rising number of fatal accidents involving drivers under 25 years of age.

Yearly 1,600,000 boys and girls reach legal driving age; 728,000 receive no training except what is picked up from friends and relatives.

"If everyone of our 1,600,000 16-year-olds passed a driver training course, we could in a generation put more than 30,000,000 drivers on our highways who had been trained in safe and skillful practices," Star said.

Since last February, Michigan has had a law that says no one under 18 can be licensed to drive unless he has passed an approved course of driver instruction. The cost of instruction in the high schools is provided for from licensing fees and the course requires a minimum of 30 hours of classroom instruction and six hours of driving.

Among the subjects taught are the motor vehicle's effect on social and cultural life; the driver's physical requirements, mental attitudes and social responsibilities; characteristics of streets and highways; legal structures and codes; automotive mechanics and maintenance; automotive consumer education, and skills in driving.

"We used to think anyone could just pick up driving, but we now realize that instruction and coaching are just as important in driving as they are in athletics, music, or bridge building," Star said.

"When a youngster just picks up driving, he usually acquires bad attitudes from his parents or other drivers. Faulty attitudes are much more often at the bottom of young driver accidents than lack of skill."

The more young drivers given knowledge and healthy driving attitudes at the beginning of their driving careers, the fewer unsafe drivers of all ages there will be in the years ahead, he concluded.

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# The Health Bulletin

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No. 2



DR. J. MARTIN FLEMING  
1867 - 1957

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List of free health literature will be supplied by local Health Departments or on written request.

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## A TRIBUTE TO DR. J. MARTIN FLEMING

BY ERNEST A. BRANCH, D. D. S.  
State Board of Health  
Raleigh, North Carolina

The North Carolina State Board of Health and, indeed, the cause of public health in North Carolina have suffered a great loss in the death of Dr. J. Martin Fleming on December 18, 1957.

Dr. Fleming was a friend of public health, in general, and of public health dentistry, in particular. It was he who made the motion in the meeting of the North Carolina Dental Society in 1918 that the Society give its whole-hearted endorsement and approval to the suggestion of Dr. George M. Cooper

that dentistry be included in the program of the North Carolina State Board of Health. This motion was carried, and North Carolina became the first State to have dentistry as an integral part of its public health program. From that time on Dr. Fleming gave generously of his time and energies to the enterprise, thus rendering great service to his profession, to public health, and to the people of North Carolina. He favored and worked for all legislation which promoted

public health dentistry in the State.

Dr. Fleming became the first dental member of the Wake County Board of Health in 1931 and served in that capacity until 1942. In 1942, when the younger dentists were called into armed service and a dentist could not be secured for position of school dentist with the Wake County Health Department, Dr. Fleming closed his office, took the job and served until his retirement in 1954.

Dr. Fleming engaged in the private practice of dentistry in Raleigh from 1895 to 1942. He was one of the best known and best loved dentists in North Carolina. He exerted a great and good influence in the affairs of the North Carolina Dental Society, and this Society conferred on him many honors. He served as president of the Society in 1903-1904. Dr. Fleming made an outstanding contribution to dentistry as a member and president of the State Board of Dental Examiners from 1914 to 1926. In this capacity he had an opportunity to encourage and influence many young dentists. For many years, when the molding and making of dentistry in North Carolina was in the process, Dr. Fleming was chairman of the Ethics Committee. To him membership on this committee, as well as on the Board of Dental Examiners, was a mandate to uphold the standards of the profession and also to protect the rights of the people of North Carolina to have the best in dental service. It can be truly said that, in carrying out this mandate, he brought honor to himself and to dentistry in

North Carolina. Dr. Fleming believed in hewing to the line himself, and he expected the same of others. Those who knew him well realized that his seeming sternness was tempered with kindness and a rare sense of humor.

Perhaps Dr. Fleming's greatest accomplishment was writing the *HISTORY OF THE NORTH CAROLINA DENTAL SOCIETY*. This scholarly work was the result of years of painstaking research and of collecting, compiling and editing material. The "History" is an interesting and invaluable book which will be a lasting memorial to his untiring and unselfish service to the profession.

Though born in Arkansas, while his North Carolina parents were living temporarily in that State, Dr. Fleming lived most of his life in North Carolina. He received his A. B. degree from the University of North Carolina in 1891 and his D.D.S. degree from the University of Maryland in 1895. He was made a Fellow of the American College of Dentists in 1929. He held membership in the Raleigh and Fourth District Dental Societies, the North Carolina Dental Society and the American Dental Association.

Funeral services were held for Dr. Fleming in the Edenton Street Methodist Church of Raleigh, of which he had been a faithful and devoted member, having served for many years on the Board of Stewards. It can truly be said that he was a public spirited citizen, a Christian gentleman and a true friend and counsellor.

## RECENTLY APPROVED PUBLIC HEALTH REGULATIONS

The following regulations affecting public health, approved by the State Board of Health February 7, 1958, are published in *The Health Bulletin* in accordance with legislation passed by the 1957 Session of the North Carolina General Assembly. —Editor,

The Health Bulletin.

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### NORTH CAROLINA STATE BOARD OF HEALTH

#### Rules And Regulations Governing State Aid Mosquito Control Districts Or Other Local Governmental Units Engaged In Mosquito Control Under- takings.

For the purpose of administering State funds received by the State Board of Health to aid mosquito control districts or other local governmental units engaged in mosquito control undertakings, pursuant to the provisions of Chapter 832, Session Laws of 1957, the North Carolina State Board of Health adopts the following rules and regulations governing: State aid to mosquito control districts or other local governmental units engaged in mosquito control undertakings.

#### SECTION I. CREATION OF ZONES

For the purpose of administering these rules and regulations, the State of North Carolina is divided into three zones as follows:

A. Zone I shall be comprised of those counties in which the studies of the Salt Marsh Mosquito Study Commission showed a salt marsh mosquito problem to exist, and shall include the following counties: Beaufort, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Hyde, Jones, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington.

B. Zone II shall be comprised of those counties not in Zone I where the highest probability of mosquito-borne disease outbreaks exists, and shall include the following counties:

Gates, Hertford, Bertie, Martin, Pitt, Lenoir, Duplin, Sampson, Bladen, Columbus, Robeson, Cumberland, Johnston, Wayne, Greene, Wilson, Nash, Edgecombe, Halifax, and Northampton.

C. Zone III shall be comprised of those counties not included in Zone I, or Zone II.

#### SECTION II. ALLOCATION OF STATE FUNDS OR FACILITIES— GENERAL

Before aid is given in the form of cash, or other items of monetary value, the county, town, or other governmental unit applying for such aid shall submit a project application to the North Carolina State Board of Health on a form provided for that purpose.

Project applications shall list the cash, materials and supplies, equipment, and other facilities that will be provided by the applicant during the fiscal year.

In computing the monetary value of local funds and facilities provided by the applicant, in order to determine the amount of State aid that can be given on a matching basis credit will be allowed for labor, materials, and general operating expenses, as well as rental on equipment that has been approved for use on the project by the representative of the State Health Director. The rental rates will be established by said representative of the State Health Director. No credit will be allowed for money spent to repay loans or to pay interest, purchase equipment or real estate, nor for overhead expenses such as clerical help, office and storage space rental, etc.

State funds shall not be spent by local governmental units to purchase equipment, make repayments on loans, pay interest on borrowed money, purchase real estate, pay clerical personnel, rent storage or office space, nor for any purposes other than those directly connected with the application of mosquito control operations.

Embodied in project applications shall be such assurances and agreements as may be required by the official of the North Carolina State Board of Health who is responsible for the administration of this activity. These shall include:

(a) The assumption by the applicant of all responsibility for claims for damage resulting from the operation of the project.

(b) An agreement to submit such plans as may be required to the North Carolina State Board of Health, and perform all work in conformity with the plans that are approved by the appropriate representative of the North Carolina State Board of Health.

(c) An agreement to use funds provided by the North Carolina State Board of Health and those shown on the project application as being provided by the applicant exclusively for mosquito control, in accordance with these rules and regulations and the approved plan.

(d) An agreement to perform all mosquito control under the direction of a competent supervisor whose qualifications meet the approval of the North Carolina State Board of Health.

(e) An agreement to submit reports at the end of each month showing work performed during the month, expenditures made, facilities utilized, and materials expended.

(f) An agreement to submit a certified financial statement to the North Carolina State Board of Health no later than ten days after the last day of December and June of each year. Such statement must include an itemized account of expenditures during the preceding six months, of both local and State funds, as well as an itemized account of other assets and facilities that have been utilized to carry out the mosquito control project. Such supporting documents as may be required by the North Carolina State Board of Health shall be included.

(g) An agreement to return to the North Carolina State Board of Health at the end of December and June of each year all State funds not matched

by local expenditures for mosquito control purposes during the preceding six months. In lieu thereof the State Health Director may allow the excess of State funds over local funds expended during the preceding six-months' period to be deducted from the State aid given the applicant during the next six-months' period.

In Zone I, if the application for State aid is made by a county, the application must be signed by the local Health Director, and the project must be operated under his direction. If the application is made by a local governmental unit other than a county, a resolution must be adopted by the governing board of such governmental unit designating an official to sign necessary papers in connection with the mosquito control project. In such cases, operation of the project shall be under the direction of the designated official, but approval of the project by the local Health Director shall be required. In Zones II and III, the project application shall be signed by the local Health Director, and the project shall be carried out under his direction.

The provisions of these regulations requiring that the local Health Director sign, approve, or direct a project shall not apply to any application made by, or project conducted by a Mosquito Control District established under the provisions of Chapter 1247, 1957 Session Laws.

### SECTION III. ALLOCATION OF FUNDS

A. Zone I. Seventy-five per cent of the State funds available for allocation to local mosquito control projects shall be set aside for aid to local governmental units within Zone I.

If sufficient State funds are available, the amounts provided by local appropriations for mosquito control projects in Zone I shall be matched on a fifty-fifty basis for temporary control measures, and on a basis of twice the amount of local appropriations, or the monetary value of other facilities provided locally, for drainage, filling or dyking. If insufficient State

funds are available for matching on this basis, the State aid is to be allocated to local projects in any one county as follows: the first one thousand dollars (\$1,000.00) of State aid is to be on a fifty-fifty basis; thereafter, the State aid is to be allocated on a pro rata basis to be determined by dividing the total remaining appropriations and monetary value of other facilities provided (above the one thousand dollars (\$1,000.00) matched on a fifty-fifty basis) by all of the local governmental units in Zone I into the total remaining State aid available for projects in that Zone. In no case is the State aid to all projects within a county to exceed fifteen thousand dollars (\$15,000.00) when there are insufficient funds to match on a fifty-fifty basis.

Two or more governmental units in Zone I may jointly employ a supervisor to look after mosquito control activities. The North Carolina State Board of Health may match funds to pay the travel and salary of such supervisors on a fifty-fifty basis, if State funds are available. The qualifications of supervisors employed under this provision must be approved by the representative of the State Health Director.

B. Zone II. The local Health Director shall be the official in Zone II who is recognized by the North Carolina State Board of Health as authorized and empowered to sign and execute documents necessary in connection with applications for aid in the control of mosquitoes, to carry out all agreements stipulated in the project applications, and perform other acts that are necessary in connection with the operation of the project.

All State funds and other facilities provided for mosquito control projects in Zone II shall be disbursed through the local Health Director on a county basis.

In Zone II, the first one thousand dollars (\$1,000.00) of State funds allotted to local health departments for mosquito control project shall be allocated on a fifty-fifty basis with local

funds. Any additional funds are to be allotted on a basis of 30 per cent State funds for 70 per cent local funds, with a maximum allocation of two thousand dollars (\$2,000.00) to any one county.

C. Zone III. The local Health Director shall be the official in Zone III who is recognized by the State Board of Health as authorized and empowered to sign and execute documents necessary in connection with applications for aid in the control of mosquitoes, to carry out all agreements stipulated in the project applications, and perform other acts that are necessary in connection with the operation of the project.

All State funds and facilities provided for mosquito control projects in Zone III shall be disbursed through the local Health Director on a county basis.

In Zone III, State funds allotted to local health departments for mosquito control purposes shall be allocated on a fifty-fifty basis with local funds, with a maximum allocation of five hundred dollars (\$500.00) to any one county.

#### SECTION IV. AUTHORIZED CHANGES IN ALLOCATION RULES

If at the end of a reasonable deadline for submission of applications for State funds to aid in mosquito control in any zone the funds set aside for aid in that zone have not been applied for, and allocated to local government units in that zone, the State Health Director is authorized to utilize such funds for assistance to projects in other zones, and to change the allocation basis.

If at the end of the second quarter of the fiscal year it is determined by the official of the North Carolina State Board of Health, who is responsible for the administration of this activity, that State funds allocated to any project will probably not be spent and matched by local expenditures, or other creditable assets by the end of the fiscal year, said funds may be reallocated to other local projects on the basis of potential mosquito densities

and local participation.

Other State funds that become available for allocation to local projects from any source, after the end of the second quarter of the fiscal year, may be allocated to local projects in either of the three zones on the basis of potential mosquito densities and local participation.

#### SECTION V. REPEAL

All rules and regulations heretofore adopted by the North Carolina State Board of Health in conflict with the provisions of these rules and regulations are hereby repealed. The regulations concerning State aid to local governmental units for mosquito control purposes, adopted by the North Carolina State Board of Health on July 18, 1957, are hereby repealed, and replaced by these rules and regulations.

#### SECTION VI. EFFECTIVE DATE

These rules and regulations shall be in full force and effect from and after February 15, 1958.

The foregoing rules and regulations relating to the administering of State aid to assist local governmental units in carrying out mosquito control projects were duly adopted at a meeting of the State Board of Health at Raleigh, North Carolina, on February 7, 1958.

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#### **Rules And Regulations Governing The Sanitizing Of Mattresses, Previously-Used Materials, Second-Hand Bedding, And Bedding Containing Previously-Used Materials; The Storage Of Previously-Used Materials; The Issuance Of Stamp Exemption Permits; And, The Transfer Of Manufacturer's Licenses And Sanitizer's Licenses.**

For the purpose of carrying out the provisions of Article 16 of Chapter 1357 Session Laws of North Carolina, the North Carolina State Board of Health hereby adopts the following rules and regulations governing: the sanitizing of mattresses, previously-used materials, second-hand bedding, and bedding containing previously-used materials; the storage of pre-

viously-used materials; the issuance of stamp exemption permits; and, the transfer of manufacturer's licenses and sanitizer's licenses.

#### SECTION I. SANITIZING

a. No person shall renovate any mattress without first sanitizing it in accordance with one of the processes authorized in subsection (e) below.

b. Any sanitizing apparatus or process used to sanitize articles as required by Article 16 of Chapter 1357 of the 1957 Session Laws of North Carolina, or by these rules and regulations, must comply with the provisions of these rules and regulations.

c. No person shall manufacture or sell in this State any bedding containing previously-used materials without first sanitizing the previously-used materials in accordance with one of the processes authorized in subsection (e) below.

d. No person shall sell any second-hand bedding or bedding containing any previously-used material unless it is sanitized, since last used, in accordance with one of the processes authorized in subsection (e) below; provided, however, that this requirement shall not apply to a mattress sold by the owner and previous user from his home directly to a purchaser for his own personal use, unless such mattress has been exposed to an infectious or contagious disease.

e. Authorized sanitizing processes

##### **(1). Process Number 1 — Dry Heat**

In this process, the bedding must be heated at a temperature of 230° F. for a period of one hour.

The chamber in which this process is performed must be insulated sufficiently to insure maintenance of a uniform temperature of 230° F. Articles to be sanitized must be placed on racks, or other devices provided therein, in such a manner that a minimum space of 6" is left around each item being sanitized, and between such item and the walls, floor, ceiling and other items. Loose materials to be sanitized must be placed in tiers on slats, or on other arrangements that permit an even distribution of heat throughout the

material. A thermometer that has been checked for accuracy within 1° F. must be placed within the chamber at a point where it can be easily read at all times through a window provided for that purpose.

(2) Process number 2 —

**Formaldehyde and Sulfur**

In this process, the bedding must be exposed to formaldehyde and sulfur dioxide gas in a moist and warm atmosphere for at least 10 hours, using one pint of 37% formalin and three pounds of sulfur to 1,000 cubic feet. Formaldehyde is generated from the formalin by adding potassium perman-ganate.

Commercial fumigators which generate an equivalent quantity of gas may be used.

The chamber in which this process is performed shall be sealed in such a manner as to make it gas tight. The placing of bedding within the chamber shall conform with the requirements set out for process number 1 above.

(3) Process number 3 — **Washing**

In this process, the bedding is boiled for fifteen minutes, and washed with an approved soap or detergent. After drying, the bedding shall be clean to touch, sight, and smell.

(4) Notwithstanding the provisions of subsections (e) (1) through (e) (3) of this section, other methods of sanitizing may be used after receiving the approval of the State Board of Health in writing, if it is demonstrated that they destroy pathogenic micro-organisms and arthropods, and remove dirt and filth.

(5) Notwithstanding the provisions of subsections (e) (1) through (e) (4) of this section, second-hand bedding and previously-used materials that show evidence of contamination with feces, urine, pus, vomit, blood, mucus, or other filth, or are not reasonably clean, must be sanitized by process number 3 only.

**SECTION II. STORAGE OF PREVIOUSLY- USED MATERIALS**

When previously-used materials that have not been sanitized are stored in

a bedding manufacturing establish-  
ment in the same room with new, or  
sanitized bedding or bedding materials,  
such previously-used materials must  
be segregated from the new, or sani-  
tized bedding or bedding materials, by  
partitions that are free of holes, cracks,  
or other openings. The top of the  
partitions must be at least one foot  
higher than the level of the unsani-  
tized materials.

**SECTION III. STAMP EXEMPTION PERMITS**

(a) Any person who manufactures bedding in North Carolina or any person who manufactures bedding to be sold in North Carolina may, in lieu of purchasing and affixing the adhesive stamps provided for by Article 16 of Chapter 1357 of the 1957 Session Laws, annually secure from the State Board of Health a stamp exemption permit upon compliance with the provisions of said article and these rules and regulations. The holder of the stamp exemption permit shall not be required to purchase or affix adhesive stamps to bedding manufactured or sold in North Carolina. The cost of a stamp exemption permit is to be determined annually by the total num-  
ber of bedding items manufactured or sold in North Carolina by the applicant during the calendar year immediately preceding the issuance of the permit, at the rate of Eight Dollars (\$8.00) for each five hundred pieces of bed-  
ding or fraction thereof. A maximum charge of Four Hundred Dollars (\$400.00) shall be made for pieces of bedding manufactured in North Carolina but not sold in North Carolina.

(b) Applications for stamp exemption permits must be submitted on forms supplied by the State Board of Health. No stamp exemption permit may be issued to any person unless he has done business in North Carolina throughout the preceding calendar year in compliance with the provisions of Article 16 of Chapter 1357 of the 1957 Session Laws, and unless he complies with these regulations.

(c) Any person applying for a stamp exemption permit must include on the

application form furnished by the State Board of Health a statement in writing showing the number of bedding items that were, during the preceding calendar year: (1) manufactured in North Carolina and sold in North Carolina; (2) manufactured outside of North Carolina and sold in North Carolina; and (3) manufactured in North Carolina but not sold in North Carolina. Provided, however, that if the applicant's statement sets out the total number of bedding items which such manufacturer produced during the preceding calendar year, it shall not be necessary for the applicant to set out what proportion of that total was manufactured inside or outside of North Carolina or sold inside or outside of North Carolina, in which case the cost of the stamp exemption permit will be determined as if the total production were manufactured in North Carolina and sold in North Carolina. The statement of the applicant required by this subsection must contain a certification by a certified public accountant that he has examined the records of the applicant and finds that the statement correctly reflects the information contained in the records of the applicant.

(d) The State Board of Health may require additional proof of the number of bedding items sold during the preceding calendar year when it has reason to believe that the proof submitted by the manufacturer (whether in-state or out-of-state) is incomplete, misleading, or incorrect.

(e) The stamp exemption permits issued pursuant to these regulations shall be valid from the first day of March of any calendar year through the last day of February of the following calendar year.

#### SECTION IV. TRANSFER OF MANUFACTURER'S LICENSES AND SANITIZER'S LICENSES

(a) If any person to whom a manufacturer's license or sanitizer's license has been issued shall sell his manufacturing or sanitizing establishment, he may transfer the license with the business, if such transfer is accom-

lished in accordance with the provisions of these rules and regulations.

(b) In order to make such transfer, and before the purchaser may use such license of the seller, the purchaser must submit to the State Board of Health the following: (1) the name and address of the seller; (2) the location of the establishment being purchased; (3) the name of the establishment being purchased; (4) the name and address of the purchaser; (5) the effective date of sale; and, (6) whether the name of the establishment being purchased is to be changed, and if so, the name under which it is to be operated by the purchaser.

#### SECTION V. VIOLATIONS

If any person shall wilfully violate any rule or regulation adopted by the State Board of Health pursuant to Chapter 1357 of the 1957 Session Laws, or shall wilfully fail to perform any act required by, or shall wilfully do any act prohibited by such rules and regulations, he shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not to exceed Fifty Dollars (\$50.00) or by imprisonment for a period not to exceed thirty days (30), as provided in Article 22 of Chapter 1357 of the 1957 Session Laws.

#### SECTION VI. CONFLICTING RULES AND REGULATIONS REPEALED

All rules and regulations heretofore adopted by the State Board of Health which are in conflict with the provisions of these rules and regulations are hereby repealed.

#### SECTION VII. SEVERABILITY

If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

#### SECTION VIII. EFFECTIVE DATE

These rules and regulations shall be in full force and effect from and after

February 15, 1958.

The foregoing rules and regulations governing the sanitizing of mattresses, previously-used materials, second-hand bedding, bedding containing previously-used materials; storage of previously-

used materials; the issuance of stamp exemption permits; and, the transfer of manufacturer's licenses and sanitizer's licenses were adopted at a meeting of the State Board of Health on February 7, 1958, at Raleigh, North Carolina.

## NOTES AND COMMENT BY THE EDITOR

### STRANGULATION FROM SWALLOWING TOY BALLOON

Two small children of North Carolina parentage have lost their lives recently in a rather bizarre type of accident—strangulation from swallowing a toy balloon. It appears that in each case, the child was trying to blow up the balloon, inhaled it, and strangled to death. In both cases the children were between 2 and 2½ years of age. A newspaper clipping reveals that two other children—a 2½ year old in New Jersey and a 7 year old in New York—died under similar circumstances recently.

The tragedy of such deaths is that they are useless deaths. There is also irony in the fact that toys given to children to make them happy can also produce death and serious injury; a toy balloon is only one example. Parents and others who buy toys for small children should be conscious of the dangers inherent in toys and should use great care in selecting them.

### THE RECOGNITION OF CHICK-EMBRYO ORIGIN RABIES VACCINE IN DOGS FOR A PERIOD OF THREE YEARS

WHEREAS, the duration of immunity against rabies in dogs following the administration of chick-embryo rabies vaccine has been shown to be effective for a period of at least thirty-six months by research conducted by the United States Public Health Service, and

WHEREAS, this research has been recognized by numerous national and international veterinary and public health organizations (World Health Organization, United States Public Health Service, American Veterinary

Medical Association, United States Livestock Sanitary Association), and

WHEREAS, the local health officers of North Carolina have been informed of this proposal and recommend its approval, and

WHEREAS, the North Carolina State Veterinary Medical Association on June 28, 1956 passed a resolution recommending that the North Carolina State Board of Health officially approve chick-embryo rabies vaccine for a period of three years when administered by a licensed veterinarian, and

WHEREAS, the Attorney General in an opinion dated 6 March 1956 has ruled that the State Board of Health under G. S. 106 - 365 is authorized to specify how often a dog must be vaccinated against rabies with the single restriction that vaccination may not be required oftener than once in each calendar year,

NOW, THEREFORE, the State Board of Health in its official meeting, February 14, 1957, does hereby establish the time or times when a dog shall be vaccinated against rabies.

1. When rabies vaccine of nervous tissue origin is administered, the dog must be revaccinated annually.

2. When rabies vaccine of chick-embryo origin is administered by a licensed veterinarian the dog must be revaccinated every three years, except that a dog under 6 months of age receiving chick-embryo vaccine shall be revaccinated after a period of one year and every three years thereafter. Provided, however, when a district or county board of health or the State Board of Health adopts a resolution stating that in order to control rabies and protect the public health, annual vaccination is necessary within the

area over which they have jurisdiction, then the dog must be vaccinated annually regardless of the type vaccine used."

### THE N. C. COMMISSION ON PATIENT CARE

You might be interested in the following information regarding the above Commission for the Health Bulletin:

There has been recently organized in North Carolina a North Carolina Commission on Patient Care. The major purpose of this Commission is to stimulate, implement, assist in, and sponsor activities which will contribute to the care of the patient. Membership consists of representatives of the Medical Society of the State of North Carolina, the North Carolina Hospital Association, the North Carolina League for Nursing, and the North Carolina Licensed Practical Nurses Association. Mr. George Harris of the Duke Foundation is Chairman.

It shall be the intention of the Commission to obtain a better understanding of the problems and programs of all represented groups; to serve as a source of information on trends within the programs of the participating organizations; to facilitate the development of a more unified public relations approach by the participating organizations; to explore the needs for and stimulate studies in areas of patient care in which the organizations participate; and to perform such functions and carry on such activities contributing to major objectives as may be mutually satisfactory to the appointing organizations and to the Commission.

### A. M. A. PAMPHLET TELLS DRIVER FITNESS RULES

Even though a person has a good safety record and thinks he's in excellent health, there are certain circumstances under which he shouldn't drive.

Some of the things that can make a driver dangerous are listed in a new American Medical Association pamphlet, "Are You Fit To Drive?"

The pamphlet, to be distributed through physicians' offices, was prepared by the A.M.A. Committee on Medical Aspects of Automobile Injuries and Deaths, in cooperation with the Center for Safety Education, New York University.

A doctor can help answer the question of driving fitness. The pamphlet urges drivers to ask their doctors when they are in doubt about their fitness.

Some of the things that make a driver dangerous are:

—Emotional upsets. Unless a person can keep his mind on the wheel and not on his worries, he should not take the wheel.

—The driver's attitude. Some drivers feel the other fellow is always wrong. Some are aggressive and intolerant when they get into a car. They need to be mature.

—Sleepiness. A sleepy driver is as much a hazard as a drinking one. Dozing is not restricted to night driving. When making long trips, a person should rest every two hours, drinking coffee or cola to stay alert. He should not take any medicine that makes him drowsy.

—Medicines. Antihistamines, cold tablets, sedatives, tranquilizers, and some other drugs may dull reflexes or impair coordination. Stimulants may make a person nervous. The doctor should be consulted about the side effects of any drugs.

—Faulty vision. A driver needs regular eye examinations; if he notices any change in his eyes between examinations, he should see his eye doctor immediately. To reduce eye strain, he should wear properly fitted sunglasses, but not after dark. To avoid tiring the eyes, excessive night driving should be avoided if possible. Hay fever or the common cold can blur the vision dangerously.

—Certain nerve and heart disorders. Some may cause convulsions and others may result in occasional loss of consciousness. The doctor is the best judge of whether a patient with these should drive.

—Diabetes. Insulin reactions may cause difficulties, but diabetic patients who follow their doctor's advice can be safe drivers.

—Old age. After 65, reflexes and coordination tend to be a little slower, people tire more easily, resistance to glare is lessened, and the ability to see at night is declining. Older drivers should schedule their trips at non-rush hours and should not spend long periods at the wheel.

—And, of course, drinking.

#### NEW THEORY ADVANCED ON SPEECH MECHANISM

Recent French research has indicated that the brain—not the movement of air in the larynx—causes the vocal cords to vibrate and produce sound.

This new and controversial theory of how man speaks was reported in Archives of Otolaryngology, an American Medical Association publication, by Esti D. Freud, Ph.D. New York, a teacher of voice and speech pathology.

The French researchers believe that vocalization results from the action of the brain on the nerves of the larynx which in turn produce vibrations of the vocal cords.

According to long-accepted theory, expiration of air from the trachea causes the thyroarytenoid muscle to vibrate and thus set up vibrations of the vocal cords.

In a note preceding the article, Dr. Ernest M. Seydell, Wichita, Kan., a member of the Archives editorial board, pointed out that some of the article's contents were "very controversial," but they were published with the hope of stimulating research in "a phase of otolaryngology in which there is much to be proved."

Dr. Freud said the French experiments have shown "beyond doubt" that vocal cords vibrate in the absence of an exhaled current of air, and that the vibrations seem to be governed by excitations deriving directly from the recurrent laryngeal nerve.

This means that the exhaled air current cannot be considered instrumental in creating the vibrations of

the vocal cords, but only as a sound-carrying medium. The exact roles of air pressure, air volume, and the breathing motions in vocalization are questions that still must be answered, she said.

Dr. Freud also reported that French researchers have shown that singing and speaking, which produce different vibratory patterns in the vocal cords, originate in different centers of the brain, even though they are both executed by the vocal cords.

This helps explain why persons who stutter or who have lost their ability to speak can still sing without difficulty, Dr. Freud said. It also helps explain why a person with a tenor singing voice may speak with a very deep voice.

Dr. Freud, a daughter-in-law of the late Sigmund Freud, is associated with New York Hospital, New York, and a Veterans Administration mental hygiene clinic in Newark, N. J.

#### NEW HORMONE RELIEVES SCLERODERMA SYMPTOMS

A new hormone that prevents premature birth is also useful in the treatment of a rare skin disease, scleroderma, two Florida physicians reported recently.

The hormone is relaxin (Releasin), which is synthesized from an extract of the ovaries of pregnant sows. Working with other hormones, relaxin influences the contraction of the uterus in pregnancy and labor.

It also has an effect on the elasticity of the skin. This effect is important in the treatment of scleroderma, Drs. Gus G. Casten and Robert J. Boucek, Miami, said in the *Journal of the American Medical Association*.

In scleroderma, the skin hardens, restricting movement. The blood supply is cut off, causing fingers, toes, and ankles to ulcerate. In addition to affecting the skin, the disease eventually attacks the internal organs.

The Florida doctors gave relaxin to 23 patients. While it had no effect on the disease itself, it did cause "significant improvement."

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# Health Bulletin

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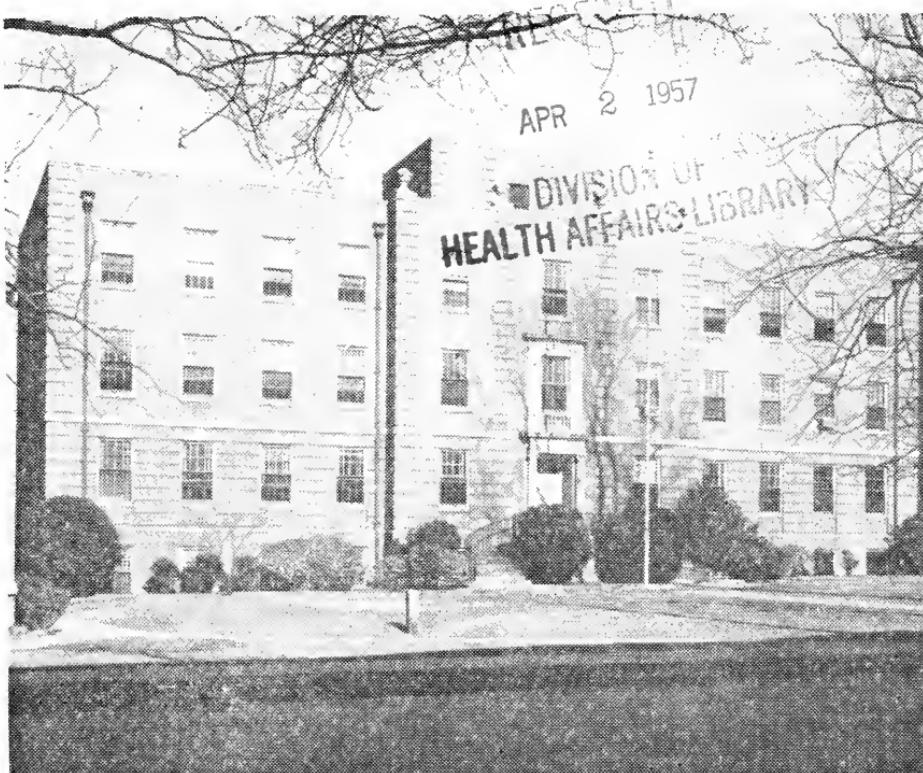
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CENTRAL BUILDING, STATE LABORATORY OF HYGIENE

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## FIFTIETH ANNIVERSARY OF THE STATE LABORATORY OF HYGIENE

By JOHN H. HAMILTON, M. D., Director  
State Laboratory of Hygiene

On February 28, 1958, the State Laboratory of Hygiene completed fifty years of existence and service as an institution. It could have been two years older had the 1905 General Assembly which created it been a little more generous with their appropriation. Only \$500.00 and fees from water analyses were made available that year. If one wishes to trace our history further back, we would find that in 1903 the General Assembly enacted a law authorizing the State Board of Health to charge \$5.00 for each analysis of water from the public water

supply, the fee to be used in paying the Department of Agriculture for this service which they had rendered since 1900. Still further back we find that in 1896 the State Board of Health passed a resolution requiring that certain chemical and bacteriological examinations be made at the University of North Carolina. Even in 1895 the Board had elected two physicians to serve as bacteriologists. Before that, in 1893, laws had been enacted for the purpose of protecting the purity of public water supplies. The background for our beginning

was undoubtedly the epochal 15-year period between 1876 and 1890 when such phenomenal progress was made in the development of bacteriology and our knowledge of infectious diseases. Then too, these outstanding accomplishments in Europe were followed by the establishment of public health laboratories in our United States, notably in New York City.

Even though the 1905 General Assembly gave us our name, it was the 1907 General Assembly which gave us our existence, for they appropriated \$2,000 per year and established a schedule of fees which we are required to collect from public water supplies. This established a precedent which has persisted to this date that the Laboratory must be partially self-supporting. There has been no change in the schedule of fees which public water supplies pay since the 1907 General Assembly; however, there has been some change in the definitions for public water supplies.

The Laboratory has been at four different locations in the City of Raleigh; the first occupied March 1, 1908 consisted of three small rooms and a closet in the Agricultural Building at the corner of Halifax and Edenton Streets. On January 1, 1909, the Laboratory was moved to more commodious quarters on the third floor of the Holoman Building on Fayetteville Street. In January, 1917, the Laboratory moved into its own building on Jefferson Street. This building was designed and constructed for laboratory work. In February, 1940, the Laboratory was moved to its present plant. The Central Building is on Caswell Square, facing West Jones Street, where specimens are examined and biological products are prepared for distribution. The Laboratory Farm, 280 acres with seven buildings is located seven and one half miles west of the Capitol, on U. S. Highways Numbers 1, 64 and 70A. Here are carried out the initial stages of the preparation of rabies vaccine and smallpox vaccine. Here too our larger animals are quartered, as well as our small animal colonies.

The Laboratory has participated

actively in many of the battles which have been fought against communicable diseases in North Carolina. In 1907 many of the public water supplies were unsafe sources of drinking water. A considerable number of the municipal supplies were suitable only for fighting fires and flushing toilets. Most cities maintained wells at numerous locations within their boundaries. Even the wells were frequently contaminated. The Laboratory played an active part in the improvement of these public water suppliers to their present high standards, and they have practically ceased to be a source of infection.

In 1916 typhoid fever was credited with causing 702 deaths. Since 1950 we have had only from 1 to 4 deaths each year from typhoid fever. In the fight against this disease the Laboratory examined not only specimens of water but specimens from patients as an aid to the diagnosis of the disease or detection of carriers. In addition large volumes of typhoid vaccine were manufactured and distributed.

In 1916 there were 410 deaths from diphtheria in the State. Since 1952 there has been no year in which we have had more than nine deaths from this disease. Here the Laboratory assisted in the fight by examining specimens as an aid to the diagnosis of the disease, the detection of carriers, and the distribution of diphtheria antitoxin and immunizing antigens.

In 1916 there were 13 deaths from smallpox in North Carolina. Since 1944 we have not had a single death from this disease. The Laboratory's only service in the fight against smallpox was the distribution of smallpox vaccine, but that service contributed to the immunization of millions.

Shortly after the announcement was made that there was hookworm infestation in North Carolina, the Laboratory confirmed the presence of hookworm disease in our State. By 1912 the Laboratory was not only making hookworm examinations at the rate of 22,000 per year; technicians were also trained in the Laboratory to make these examinations in the field. The salaries of these workers were

paid by the Rockefeller Sanitary Commission. This hookworm campaign did much to reduce the prevalence of intestinal parasites in the State and to establish public health as a worthwhile procedure.

The best known work of the State Laboratory of Hygiene is the examination of dog heads for rabies. Whenever the name of the State Laboratory of Hygiene is mentioned at nearly any crossroads in North Carolina, people know that is the place where dog heads are examined, although they may be unaware of any of our other activities. In addition to aiding in the diagnosis of rabies in animals, the Laboratory as early as 1917 administered antirabic treatments to patients coming to Raleigh. By 1919 the Laboratory was distributing antirabic vaccine to physicians who could administer it in their own offices. The largest number of animal heads ever examined in a single year was in 1935 when some 2000 were received at the Laboratory. We are winning the fight against rabies, provided we do not relax our efforts.

The largest activity ever undertaken by the Laboratory was in connection with the fight on syphilis. In 1918 we started making the Wassermann test. As with other procedures we have discarded the older tests and adopted newer ones whenever we were convinced that we were making improvement in our services. The largest number of blood tests we ever made in a single year was in 1941 when a total of 427,488 specimens were examined. Ninety-four thousand of these were from draft registrants being made ready for World War II. Here, too, we seem to be on the winning side, providing the efforts which are now being made are sustained.

During the first calendar year of the Laboratory's existence — 1909 — 2,902 laboratory examinations were made. In 1912 this number had increased to 5,058. For the calendar year 1957, more than 500,000 examinations were made. The intervening years have generally shown an upward trend in the volume of work. Some years, as 1941, when syphilis serology was

urgently needed and when additional workers were available, showed extraordinary activity.

Our specimens come from physicians, local health departments, state institutions, hospitals and public water supplies.

Most people in the State are fairly familiar with the aid which the Laboratory renders to physicians in the diagnosis of disease and to health departments in the detection of carriers, and also with the large volume of biological products distributed to those who are authorized by law to use them. Few people realize that the epidemiologist can use laboratory findings to detect an impending epidemic and take steps to prevent it just as well as he can use the Laboratory to solve the mysteries of an epidemic in full bloom—an outbreak of food poisoning, for example.

Our oldest activity, yet one as useful and even more widely used today, is the work we can do to help safeguard the quality of drinking water. A newer endeavor in this general field is to assist the stream pollution work in making our rivers and their tributaries a bit cleaner and more usable. A newer activity is in the field of viruses — their isolation and identification. The newest activity is the monitoring of water and foods for radioactivity. In addition to the examination of specimens and the biological products which we distribute, we have the responsibility of approving local laboratories for serological tests for syphilis — some 180 of them — and the certification of laboratories for the testing of milk which may be shipped from North Carolina to other states. There are 25 of these certified milk laboratories.

At present our staff consists of 74 people, 32 of whom have been with us for more than ten years. Two have been with us for more than 40 years; five for from thirty to forty years; three from twenty-five to thirty years; five from twenty to twenty-five years; eleven from fifteen to twenty years; and six from ten to fifteen years. In addition, one has retired after forty years and one after thirty-nine years.

of service, and one died after twenty-nine years of service. All members of our staff are important; some may draw larger salaries than others, but each and every one make a contribution to the smooth operation of the Laboratory and the quality of work performed. The persons doing laboratory work are well trained and proficient in their particular field of activity. All hold Bachelor degrees—several have advanced degrees. We have a promotional system. Practically all of those in the higher classifications have been promoted from lower classifications in the Laboratory. A youngster can come to the Laboratory immediately after graduating from college and be given an opportunity for advanced training and promotion. In fact, a person can make a life career in the Laboratory of Hygiene with a reasonable degree of assurance that he can marry, have a home, rear children, house, feed clothe and educate them adequately and have security in his old age. He will never be rich, if his sole income is from the State, but he can enjoy his work because he knows that he is making a worthwhile contribution to the well-being of his fellow citizens. He can have pride in his accomplishments and hopes for the future. We have a staff of laboratory workers of whom any laboratory director could be proud.

We have endeavored to outline

briefly the State Laboratory of Hygiene as an institution dedicated to rendering service helpful in the detection, treatment and prevention of disease, as well as evaluations of unfavorable environmental conditions.

An institution is more than buildings, equipment and supplies. It is people, who motivate it, who give it intelligence, loyalty, devotion, responsibility, reputation and tradition. The State Laboratory of Hygiene is fortunate that its founder and director for more than 25 years was Dr. Clarence A. Shore. He and his associates set the ideals and traditions of service which those who followed them have endeavored to maintain. Mr. J. W. Kellogg, in the April 1940 *Health Bulletin*, gave a brief but meticulously documented history of the Laboratory from 1908 to 1940. This, April, 1940, *Health Bulletin* is devoted entirely to the dedication of the present plant to Dr. Shore.

As we look backward with pride in the past we also look forward with hope for the future. We have confidence that the service which our institution has rendered during its first half century has established us so firmly as a worthwhile institution that during the second half century of our existence we shall render even greater service. The State Laboratory of Hygiene has a part in the future.

## NOTES AND COMMENT

By the Editor

### **Dr. Applewhite Retires**

After forty-four years in service to the public health Dr. C. C. Applewhite has certainly earned the privilege of retiring. For more than eight and one half years—July 1, 1949, to January 31, 1958 he served as Director of Local Health Work for the North Carolina State Board of Health. He came to our State with a long and honorable record of accomplishments in public health over an area extending from the Atlantic ocean to the tier of states west of the Mississippi.

He tackled our problems in North Carolina with energy, enthusiasm, knowledge, experience and natural ability, with which he had been richly endowed. His tour of duty in North Carolina was fruitful. The General Assembly of 1949 had just increased the appropriation for State aid to local health departments by \$800,000. The equitable distribution of this new money among the local health departments, some of which was for single districts and some for municipalities which maintained separate organi-

zations, helped set the stage for an expanding health program. After 1949 there was no increase in State funds and an actual decrease in Federal funds; yet Dr. Applewhite was most helpful in persuading local appropriating boards to increase local funds. The result tells the story. In 1950 local funds were \$2,693,246 of the \$4,372,628 expended for local health work in the State, the State funds being \$1,500,000 and other sources, mostly Federal, \$529,383. Through the years local health funds increased, while State funds remained stationary and Federal funds decreased, until, in 1958, local money amounted to \$5,334,965 of the \$6,905,758 budget for local health work.

In 1950 only some eight or ten of our local health departments were adequately housed. Most of them were crowded into basements or attics. By 1958, 73 new health centers had been completed to house our local health departments, and eight more were under construction. Dr. Applewhite and Dr. John A. Ferrell of the Medical Care Commission teamed together to induce county commissioners to construct these worthwhile buildings. Better housing facilities have helped our local health work in many ways. They have made it possible to improve the quality and increase the quantity of service which could be rendered. Veteran health workers have been encouraged to remain steadfast in the faith, and recruiting of capable, well-trained young men and young women as public health workers should be less difficult.

While encouraging and stimulating the procedures which have been considered a fundamental part of a well-regulated health program, Dr. Applewhite did much to make mental health a definite part of our public health activities. His position is that much can be done to prevent mental disease and that public health workers can make a worthwhile contribution in that field of endeavor.

Dr. Applewhite's kindly, sympathetic and understanding attitude won him a host of friends in North Carolina. When it was learned that he was re-

tiring, the local health workers were the first to decide that due recognition should be made of our love and affection for him. The staff of the State Board of Health and the North Carolina Public Health Association followed their lead. On January 31, his last working day, a special meeting of the North Carolina Academy of Public Health was called. A traveling bag was presented to Dr. Applewhite by Dr. John Fowler, director of the Durham Child Guidance Clinic, in behalf of the mental health workers. Dr. W. A. Browne, director of the Edgecombe County Health Department, speaking for the local health workers and the staff of the State Board of Health, presented him with a lounging chair with the hope that he would enjoy many restful and pleasant hours reclining in it. Dr. J. W. R. Norton presented him with a stack of letters written and signed by numerous well-wishers. These have been bound in book form. Dr. Applewhite has said: "Frankly, this tour of duty in North Carolina will always be considered by me as the happiest one in my entire public health career." When we review his biography we in this State may justly feel highly complimented.

Born—Winona, Mississippi, 1887

Attended Millsaps College, 1903-1907

—A. B. degree

Taught public school in Mississippi, 1907-1909

Attended Vanderbilt University, 1909-1913—M. D. degree

Attended Harvard School of Public Health, 1932-1933—M. P. H. degree

Career:

Rural sanitary surveys, USPHS, in Mississippi, Georgia, North Carolina, Alabama, Tennessee, Illinois and Texas, 1914-1917

Extra cantonment sanitation, USPHS, in Georgia and New Jersey, 1917-1919

Rural health work in Georgia and Kentucky 1919-1922

Director of Local Health Service, State Health Department, Jackson, Mississippi, 1922-1932

Rural health work, State Health Department, Columbia, S. C., 1933-1935

Regional consultant, USPHS, New York, Chicago and New Orleans Districts, 1935-1941

District Director, USPHS, Kansas City, Mo., 1941-1945

District Director, USPHS, New Orleans, La., 1945-1949

Director, Local Health Division, N. C. State Board of Health, 1949-January 31, 1958

Received Reynolds Award for outstanding achievement in public health field in North Carolina for 1953

Diplomate, American Board of Preventive Medicine and Public Health

Fellow, American Medical Association

Member Wake County Medical Society

Member, Medical Society of the State of North Carolina

Member, American Public Health Association

Member, American College of Preventive Medicine

Member North Carolina Academy of Preventive Medicine

President, North Carolina Academy of Public Health

Dr. Applewhite has left North Carolina to return to Mississippi, the State of his birth and early manhood. Although we are saddened by his departure from the ranks of public health workers in North Carolina, we are pleased that we have known him and have had the privilege of working with him in promoting the well-being of the people of North Carolina. We of the staff of the State Board of Health join with other health workers throughout the State in wishing for him many happy years in the land of the living. Our affection for him goes wherever he goes. We will remember him as an honorable Christian gentleman.

#### COMPULSORY POLIOMYELITIS VACCINATION

For nearly two years we have had suggestions from various and sundry sources that there should be a law, rule or regulation requiring that all children be vaccinated against poliomyelitis. The frequency with which

these suggestions are made is increasing. There have been newspaper editorials. The problem has been discussed by boards of health, both local and State. The evidence is accumulative that poliomyelitis vaccine is effective in preventing paralysis due to this disease. Just how long the protection induced by the vaccine will last is yet to be determined. Another year of experience with the vaccine will be possible before the General Assembly of 1958 meets. In the meantime it is not necessary that any of us make a decision as to whether or not we favor compulsory vaccination against poliomyelitis.

#### Physical Therapy

Duke University, Durham, North Carolina, has inaugurated a program of graduate credit for specified courses in the physical therapy program. This augments the certificate course in physical therapy offered for the past fifteen years by Duke University Medical Center and approved by the Council on Medical Education and Hospitals of the American Medical Association.

The new program in physical therapy is conducted under the joint auspices of the Graduate School of Arts and Sciences and the Duke University Medical Center. The program has two phases: (1) The fundamental courses in physical therapy are studied in the first fifteen months. During this period fifteen hours of graduate credit, which meet one-half of the graduate residence requirement, may be accumulated. The Certificate in Physical Therapy is awarded upon completion of this work. The graduate is then eligible to become a member of the American Physical Therapy Association, to take state and national licensing and registration examinations and to work as a qualified physical therapist. (2) Later specialization in anatomy or in physiology can provide the additional fifteen hours of graduate credit necessary for the Master of Arts degree. This second phase, including preparation of a thesis, may be formally scheduled in one semester.

### Radio Program

The State Board of Health's weekly radio program, over Station WWNC in Asheville, heard every Saturday, has been changed from 9:15-9:30 A.M. to 1:45-2 P.M. The subject of this program is "Your Health And You," and it is designed to reach listeners in the western part of the State. The Board also gives a program known as "Your Public Health Reporter" over Station WPTF, in Raleigh, each Saturday, beginning at 1:30 P.M. The scripts are prepared and delivered by William H. Richardson, publicity officer for the Board.

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### AUTOMATION CONTRIBUTING TO OBESITY PROBLEM

Automation may have its advantages but it is causing a major problem in the field of medicine.

More and more people are tending to become overweight as a result of our new sedentary life which provides more leisure time with less heavy physical work, according to Dr. Robert H. Barnes, of Seattle.

Writing in the Journal of the American Medical Association, the University of Washington School of Medicine doctor said, "Reduction and permanent weight control require healthy changes in living habits."

In addition to physical examinations and general health evaluation, a physician today must also concern himself with the patient's personal living habits if he is to recommend an effective reducing program.

"Usual eating habits and average daily physical activity are two of the most important points to be explored," said Dr. Barnes. He added, "There is no single approach to the treatment of obesity, only lifetime control."

A special history should be the first step in determining a program to bring long-term results. This history will give an index of past and present weight, maximum weight, and estimated ideal weight.

The second step is to modify the way of eating, which must be designed to be followed during the patient's lifetime. This approach is more satisfactory on the long-range basis than

the conventional rigid diet, Dr. Barnes said.

Lowering the caloric intake is necessary for anyone to reduce. Despite the fact that dieting alone has been a failure, it is still the principal support in reducing, he said.

In setting up a diet, the patient's working facilities, meal hours, family food patterns, and income level must all be considered.

Additional steps in the program should include the use of medication (dispensed under a physician's supervision), exercise, and posture control.

He noted, "Moderate exercise, month in and month out, can be the difference between following a starvation regimen and being able to follow a more normal diet according to one's appetite.

"Here again modern civilization makes it difficult for the overweight patient to do regular exercising such as walking. The habit of riding everywhere, even three blocks to the store, has depressed the physical activity of many to a very low state."

There should also be developed a close relationship between doctor and patient, for, according to Dr. Barnes, "The patient should realize that he is under the care of a physician not only to lose weight but also to have treated the associated medical disorders common to obesity which commercial reducing salons are admittedly incapable of recognizing and treating."

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### FACIAL PAIN CALLED "MOST AGONIZING"

The reasons for facial pain being "perhaps the most agonizing of all afflictions" were given by a Georgia doctor.

There is a reasonable physical reason for severe suffering from facial pain. The "cephalic end of man has been blessed with the highest degree" of nervous development, which allows for the most acute awareness of any sensory stimulation.

Also the head and face command more attention than other parts of the body, Dr. George W. Smith, Augusta, Ga., said in the *Journal of the American Medical Association*.

Man is very much aware of his face and head and its vulnerability to injury or hurt. Accordingly, he is quickly and greatly concerned about any painful sensation.

Awareness of others scrutinizing his exposed face magnifies any sensation he might be experiencing, although there may be no objective change to the observer, Dr. Smith said.

The way people bear pain depends on their own personalities, emotions and neurotic tendency, he said. This difference among people makes evaluation, diagnosis, and treatment of facial pain a complicated and difficult problem for the doctor.

The precise diagnosis and localization of the origin of facial pain is difficult because there are so many nerves and they so overlap that it is hard to distinguish just what path the pain is following.

Relief depends on the cause. If it results from something other than nerve damage, such as infection in the mouth or a tumor, it can be relieved by eradicating the cause. When the nerves themselves are damaged or diseased, the treatment is more complicated, often involving surgery.

Dr. Smith is in the division of neurological surgery, the Medical College of Georgia.

### Hospitals

One out of eight Americans will be hospitalized during the coming year. For the first time, many of us will know what a hospital really is—how it restores and protects our health.

There was a time, according to an article in the spring issue of *Blueprint for Health*, a publication of the Blue Cross Commission of the American Hospital Association, when the name "hospital" had an entirely different meaning.

"The Hospital Throughout the Ages" is the first of an eight-part series written by Arnold A. Rivin, formerly of the American Hospital Association. Rivin shows how the modern hospital was "a long time coming" by tracing its origin back to the fifth century B. C. in Ceylon. Even as late as the eighteenth century "hospitals" were used

primarily to house human derelicts.

The idea of a voluntary hospital solely for the curable sick emerged in the British Isles in the early 1700's. The Pennsylvania Hospital in Philadelphia is generally accepted as the oldest true American hospital. It was founded in 1751 with the active aid of Benjamin Franklin.

In the 1800's the quality of patient care and hospital maintenance were so poor that most hospitals actually contributed to the spread of disease. With the development of ether, radical improvements in sanitation and hygiene, the use of new techniques and specialized equipment, hospitals emerged gradually into the form we know today.

By the 1900's, more and more people who had formerly been treated at home went to the hospital for treatment. As the number of hospital admissions increased, it soon became apparent that a plan was necessary which would make hospitalization available to every family burdened with illness, regardless of its financial status. Within the past twenty-five years, this need has been answered by steadily increasing nation-wide enrollment in prepayment plans for hospital care.

Thus today your hospital has become a community center for treatment of the sick. Mr. Rivin closes his article with the optimistic thought that whatever ailment one out of eight of us has during the coming year, we now stand an excellent chance of being released from the hospital soon—in better health.

### Industrial Health Conference

New problems and progress in the control of occupational health hazards and the provision of preventive medical services by industry will be discussed at the Thirteenth National Industrial Health Conference, to be held at Convention Hall in Atlantic City, New Jersey, April 19-25, 1958. Over 3,000 occupational health specialists, businessmen and labor leaders will hear papers on problems of growing significance to industry, workers, and the community. A total of 134

papers will be presented on such subjects as radiation, mental health in industry, air pollution, noise, medical care and in-plant health services, industrial dentistry and industrial nursing.

**Radiation.** — Comprehensive sessions on radiation will cover such specialized facets of the problem as standardization in nuclear energy; radiation protection laws and codes—a scramble for action; radiation dosages to medical personnel; environmental radioactivity in the nuclear test airplane test area; radiation safety monitoring of reactor demolition; the licensee inspection program of the Atomic Energy Commission; facts and fallacies about radiation exposure; diagnostic radiation in industry, uses and abuses; microwave radiation hazards; and the Pennsylvania radiation protection program with its outlawing of shoe-fitting fluoroscopes.

**Mental Health in Industry.** — Since studies have shown that as much as one-third of sickness absenteeism in industry is due to mental health problems, this is a problem of paramount concern to industrial physicians and management. A symposium will be held on this subject centering on early recognition of emotional problems by industrial physicians.

**Air Pollution.** — The pollution session will cover numerous papers, including air pollution control in New Jersey, a progress report of the New Jersey Air Pollution Control Commission; the application of simplified techniques to air pollution measurement; air pollution problems in petroleum refining; the effects of air pollution on human health; and pollen removal by air filters.

**Noise**—Papers on noise will include a report of a Public Health Service study on industrial noise and hearing loss in a controlled population; industrial audiometry; hearing loss related to non-steady noise exposure; reduction of air flow noise; acoustical treatment of walls and ceiling; and noise control methods used in foundry operation.

**Medical Care and In-Plant Health Services.** — A symposium will be held on medical care of industrial workers,

covering labor's health goals; the medical care plan of Endicott-Johnson Corporation; and community health association plans for operation in Detroit. A special session will also be held on health services for small plants, including a paper on the value of small plant health programs to management.

**Industrial Dentistry.** — The sessions on industrial dentistry will include a symposium on dentistry as related to safety in industry, a panel discussion on the cost of an industrial dental program to management, and paper on the possibility of dental coverage in health insurance programs.

**Industrial Nursing.** — The industrial nursing sessions will include discussions on the effective use of community resources; automation; and preparation for catastrophic and emergency situations in industrial plants.

**Other Sessions.** — Numerous papers will be devoted to other aspects of occupational health, including the toxicity of various substances used in industry; engineering, chemical and analytical procedures as related to industrial health; rehabilitation and alcoholism.

Special Conference addresses include the C. O. Sappington Memorial Lecture, to be presented by C. W. Shilling, M. D., Deputy Director, Division of Biology and Medicine, Atomic Energy Commission, on "Everybody's Business—The Problem of Fall Out and Radiation." The Donald E. Cummings Memorial Lecture will be given by Major General James P. Cooney, Deputy Surgeon General of the Army, who will speak on "Interpersonal Relations." In an address commemorating the 20th anniversary of a professional organization participating in the Conference, Mr. John J. Bloomfield, known as one of the founders of modern industrial hygiene in the United States, and now Regional Consultant in Industrial Hygiene at the Institute of Inter-American Affairs, will report on "What the American Conference of Government Industrial Hygienists has done for Industrial Hygiene."

The Industrial Health Conference is sponsored by the Industrial Medical Association, the American Industrial Hygiene Association, the American Association of Industrial Dentists, the American Association of Industrial Nurses, and the American Conference of Governmental Industrial Hygienists.

H. W. Lawrence, M. D., Medical Director, Procter & Gamble Co., Cincinnati, Ohio, and President-elect of the Industrial Medical Association, is General Chairman of the Conference. C. Scott McKinley, M. D., Medical Director, Bakelite Corporation, Bound Brook, New Jersey, and Mr. N. V. Hendricks, Esso Research & Engineering Company, Linden, New Jersey, are Deputy General Co-chairmen.

Advance registration forms, as well as a copy of the program, may be obtained from Edward C. Holmlund, M. D., Managing Director, Industrial Medical Association, 28 East Jackson Boulevard, Chicago 4, Illinois.

#### FINGERPRINTS CAN BE REMOVED BY SURGICAL TECHNIQUE

Fingerprints, always considered to be permanent and unalterable, can be completely removed by the surgical technique of skin planing, a New Orleans doctor reported.

Two Detroit physicians also reported that they have proved an assumption of law enforcement officials that prints of the second or dermal layer of skin can be used for identification purposes as well as those of the top layer or epidermis.

Their reports appeared in Archives of Dermatology, an American Medical Association publication.

Dr. James W. Burks Jr., of the Tulane University School of Medicine division of dermatology, said his preliminary report has important legal implications because the possible removal of fingerprints makes positive identification by this means uncertain.

He treated two men with arsenic-caused horny growths on the hands by planing the skin with a high speed electric wire brush. At the same time, he planed a finger of each man, removing the epidermis and the upper

part of the dermal layer. Skin planing is often used to remove scars from acne or small pox.

Weeks after the planing, the fingers were smooth, slightly pinker, and without visible ridges. A hand lens showed the normal arrangements of whorls to be replaced by minute, thin, criss-crossed and parallel lines similar to those on the back surface of the web between the thumb and index finger.

Dr. Burks warned dermatologists that they must guard against treating criminals who seek to have their fingerprints removed. He added, however, that criminals who have this means of identification altered may still be recognized through "other equally satisfactory means." In fact, the "very absence" of ridge patterns on fingers could reflect an attempt to conceal identity. Dermatologists can help law enforcement officers in determining the medical reasons for a person's having planed fingers, he said.

The Detroit physicians, Drs. Harold Plotnick and Hermann Pinkus, ran an experiment on the similarity of epidermal and dermal fingerprints. Using recently amputated fingers, they first took prints of the epidermis. They then removed the epidermis and took prints of the dermis (also called the corium or "true skin").

The two prints were identical except that the ridges of the dermal prints appeared split or double, as well as finer than those of the epidermis. The dermal print is "just as effective for identification purposes," they said.

Their study resulted from an actual case in Boston in which Dr. Pinkus was asked by the police to explain the difference between epidermal and dermal fingerprints.

The police had found the body of a man and suspected that he had been murdered by his wife and dumped into the water. All the skin had come off the fingers, but prints were taken from the denuded dermal surfaces. It was up to the police to convince the jury of the identity of these prints with ordinary prints on file.

"They built up a nice case with the information, but the wife confessed just before the trial opened, so all the

effort had been for nought," the doctors said.

It did, however, lead to the study proving the validity of dermal prints as a means of identification.

#### NUTRITION PLAYS NO ROLE IN ARTHRITIC PROCESS

There is no special diet for the treatment of arthritis, according to the American Medical Association's Council on Foods and Nutrition.

In a special report prepared for the council, Dr. William D. Robinson, Ann Arbor, Mich., said joint diseases are "essentially diseases of the supporting structure of the body, the connective tissue." It is "extremely unlikely that the functioning of this tissue can be directly affected by dietary manipulation."

However, patients with diseases of joints do need to pay attention to their diet, because of its effect on their general state of health, Dr. Robinson said.

Many diets and specific vitamins and minerals have been suggested for the treatment of arthritis, but research has failed to show any relationship between nutrition and the cause of most rheumatic diseases.

Gout is the only fairly common form of joint disease in which diet and the use of food by the body have been shown to affect the disease. Food allergy, high fat diets, and periods of fasting all precipitate gout attacks; therefore, patients need to watch their diets carefully.

Occasionally special diets are needed by persons with arthritis, even though they will have no effect on the disease itself. For instance, overweight patients often need to lose weight to reduce the load on the affected weight-bearing joints. Diets high in calories, proteins, vitamins, and minerals are sometimes necessary for patients who have lost weight and muscle tissue, a situation frequently encountered in rheumatoid arthritis.

Dr. Robinson noted that many forms of rheumatic disease are self-limiting,

with a tendency to subside spontaneously after a varying length of time. Confusion of such conditions as bursitis or psychogenic rheumatism with various types of arthritis undoubtedly has been responsible for the claims of value for various diets and vitamins as treatments for arthritis.

Dietary treatment for the arthritic patient may be an important aspect of the total program of effective treatment, but such treatment "must be adapted to the general condition of the individual patient as well as to the type of rheumatic disease present," Dr. Robinson concluded.

He is in the department of internal medicine and the Rackham Arthritis Research Unit of the University of Michigan. His report appeared in the *Journal of the A.M.A.*

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#### TWO-MONTH-OLD BABIES NEED POLIO SHOTS

Polio shots for infants as young as two months were recommended recently in a guest editorial in the *Journal of the American Medical Association*.

At present shots are generally begun at six months of age. However, several groups of researchers have found that many infants lose the immunity with which they are born before they reach six months.

Dr. Lauri D. Thrupp, chief of the poliomyelitis surveillance unit of the U. S. Public Health Service's Communicable Disease Center, Atlanta, Ga., said the American Academy of Pediatrics has recommended beginning the shots at two months. The third shot should follow the first two by at least six or seven months.

During 1956, attack rates of paralytic polio were highest in one-year-old children and the largest proportion of cases occurred in the under-five-year age group, Dr. Thrupp said. Preliminary data for 1957 indicate that a comparably high proportion of paralytic cases is occurring in pre-school-age children.



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## Nursing Homes and Homes for the Aged — The Heart of the Matter\*

By L. E. Burney, M. D.  
Surgeon General, Public Health Service  
U. S. Department of Health, Education, and Welfare

First let me express my sincere appreciation to every individual who has a part in this Conference. I am especially grateful to the Planning Committee, the section chairmen, and all others who have worked hard these past few months so that nothing shall be lacking to make this Conference a rewarding experience.

It is my earnest hope that after these four days of working together, each of us will return to our usual tasks with a clearer understanding, a firmer pur-

pose, a wider vision of our individual and collective responsibilities for the patients in nursing homes, the residents of homes for the aged. They are the ones who must reap the rewards of this Conference. They are the sole reason for our being here together this morning.

Today, in a nursing home not far from here there is a little old lady aged 90 years, a former schoolteacher. She is happy, active, comfortable, busy with her crossword puzzles, books, and

newspapers; taking her daily walk around the block with the aid of her aluminum walker; watching the world go by from her cheerful front-room window.

I am glad you did not see her a year ago. A series of heart attacks and mild strokes had made it impossible for her to do her housekeeping and manage her own affairs. She was alone in the world—without a single relative, living in the house that had been her home for nearly 50 years. Neighbors had helped as much as they could—or she would let them; they had tried to persuade her to sell the house and make other living arrangements. But like most folks, she wasn't willing to admit she couldn't take care of herself in her accustomed way.

Her neighbors moved out of the old but rapidly deteriorating neighborhood. Soon she became a prey to certain vicious types—creatures who offered to take full care of her house in return for free room-rent. Their next step was to borrow money from her whenever her pension check arrived—loans which were never repaid. Prized possessions (sometimes essential household articles and clothing) found their way to second-hand dealers—or “disappeared”. Often there was not enough money for food, heat, utilities.

When the severe stroke came that crippled her, she was living in utmost squalor, helpless in an unheated room. The postman, missing her usual greeting and getting no response to his knock, summoned the police. After a few weeks in the hospital, she was removed to a nursing home.

There, with skilled care under a physician's supervision, she was restored to her present state of self-care, better health, comfort, and good spirits. Her pension and funds from sale of her house will assure good care in the nursing home as long as she lives. Her remaining years, it is safe to say, will be far happier than in any other setting.

I wish she could be on this platform this morning. I wish she could attend every section meeting. For she—and some 300,000 other elderly people in nursing homes and homes for the

aged—is the focal point of all your deliberations, the guiding star of this Conference. If there is any charge I would lay upon you, it is this: Never lose sight of her, or her counterpart in some home known to you.

It is not easy for a Conference like this to keep focused on the human factor—the people whom each of us sincerely desires to serve. In order to arrive at our goal of better service, we must deal with scores of impersonal factors, it is true; but the danger is that we tend to become preoccupied with our own special concerns.

Those of us who are physicians may become preoccupied with diseases, diagnoses, and prognoses. We may tend to think of “cardiacs” or “paraplegics”, or—even more impersonally, if we are in organized health services—of “programs” and “procedures”.

Nurses may think of “nursing techniques”, “medications”, and “supervisory problems”. Builders and administrators of institutions, licensure officials and inspectors, may think in terms of “specifications, regulations, and cost accounting.” Social workers may think of “case loads”, and “referrals”, and “therapeutic interviews”.

If each of us thinks exclusively in his own little specialty, we do so at the peril of the people we serve. And we do so at the peril of our own careers and organizations. For although each individual, each group has a necessary contribution to make, no one—I repeat, no one—has all the knowledge, all the skills, all the resources required to place and maintain our elderly retired schoolteacher in her present happy state.

No more can we think exclusively in terms of our particular zones of responsibility in the scheme of things. Some of us function in the zone of national organizations; others in a state. Some of us live, move, and have our being in local communities; others in individual nursing homes. Again placing the patient in the center: we know that the nursing home describes the first zone around him; and around the home, the individual community in which it stands. But if all members of the Conference do not

extend their thinking inward from the national periphery to the center; and outward from the nursing home to the periphery—neglecting no intervening zones—we will not learn the most important lessons that such a meeting should teach.

I am not concerned now with what you will learn in the working sessions about the merits of this physical therapy technique or that; of this type of building design or the other; nor about the specific advantages of one plan of community organization or another. I am not even concerned at this point with the recommendations you will bring out of your discussions.

I am concerned, however, that all of us—Federal workers no less than their colleagues in other areas—shall take from this Conference some firm convictions along the following lines:

First, as "no man is an island", so also no national agency, no state, community, or home is an island. What each one does or fails to do affects in some way, in some degree all the others. And this in turn affects for better or worse the men and women in our nursing homes and homes for the aged.

For this reason, we who have accepted any kind or degree of responsibility for the well-being of aged people, owe to each a sort of loyalty. They are the center around which we must rally to integrate our interests, talents, and functions. Without such integration, the better care which each of us visualizes and works for in his own way, will not materialize. So we cannot afford to let a colleague's efforts go unmarked with respect; we cannot let his successes go without rejoicing, nor his failures without true regret and prompt help to put things right.

Second, there is no "ideal" pattern for nursing homes and homes for the aged in the kaleidoscope of health service for older people.

I don't know whether any of you remember your childhood fascination with a kaleidoscope. Do you remember how when you turned it, an endless variety of beautiful, varicolored patterns appeared? And how amazed you were to learn that all the patterns were

made with the same bits of colored glass? It did no good for an older child to tell you "It's done with mirrors!" The fascination remained with you.

This is a lesson—a fascination, if you like—that I hope you will find in this Conference. The numerous, variegated health services that older people require, like the bits of colored glass in a kaleidoscope, can be arranged in an endless variety of harmonious, effective patterns to suit the circumstances of any individual, any family, any community or state. Provided, of course, that all the bits are there and all are of fine quality glass. If one part is missing or the colors are poor, the pattern will be flawed.

Now the nursing home or the home for the aged is only one of the parts and its place in the pattern is dependent upon all the rest—the availability and the quality of other health services for the aged. This interdependence of services makes your task of focusing on the patient in the nursing home, the resident of the home for the aged, an especially difficult one.

No conscientious group—and the membership of this Conference is exceptionally conscientious—can consider, for example, the quality of physicians' services, hospitals, social case-work, and dozens of other services. The characteristics of patients in nursing homes inevitably lead to concern about the causes of ill health and disability; to speculation of future needs as indicated by health statistics and general population data; to perplexity as to the financial problems of older persons and the costs to tax-payers for care of partially or fully dependent segments of the population.

Almost before you know it, the entire nation-wide problem of aging in these United States can invade your deliberations and take over. But this is not a conference on aging. Nor is it a conference on chronic disease—nor a conference on the health of the nation. These larger fields, in which the nursing home and home for the aged have a unique place, are beyond the scope and purpose of this conference.

Can you keep your eyes on these single bits in such a vast kaleidoscope?

Can you find a common vantage point from which their place in the pattern and their quality can be described in practical terms as realistic goals for every institution, every community and state, and every national organization? I am confident that you can and will.

But you know it cannot be "done with mirrors". It must be done with the patience and persistence of each member of this Conference. Giving due recognition to the impact of these larger, dynamic forces on the extent and quality of nursing home service, you will firmly decline to solve *everybody's* problems, and be content with finding the best possible solution for this one central problem.

The *centrality* of this problem is the third lesson I would have us learn here and teach throughout the country.

Facilities and services that permit better care are at the center of the larger problems surrounding the older person in our society. You will note that this time I have not used the terms "nursing home" and "home for the aged". No one here, I believe, is completely satisfied with the terms, still less the men and women who live in the institutions so designated. But the lack of enough high-quality *institutions of these types* is the central factor in the total problem of medical, health, and hospital services throughout the country.

That lack keeps tens of thousands of older patients in general hospitals for prolonged periods beyond the time when they need, or can even benefit from, "full-dress" hospital services. This is true in metropolitan areas and in small communities. Many of you will recall the findings of a survey of morbidity in municipal hospital of New York City, published in 1955. About one-fourth of the patients aged 65 and over remained more than 30 days in the hospital as contrasted with only 13 percent of all younger age groups.<sup>1/</sup> In Franklin, Indiana, a study in 1957, of the community hospital, serving a county of 35,000 population, showed that 66 percent of the patients remaining 30 days or longer in the hospital were over 65.<sup>2/</sup>

The lack of enough high-quality in-

stitutions of the "nursing home" or "home for the aged" variety places persistent and exorbitant demands upon many communities for additional general hospital beds. The needs of their increasing populations for care in acute illness cannot be left unmet. The higher costs of ever-increasing general hospital facilities, both in construction and operation, are rapidly becoming a burden that the individual communities, the state, and even the total national economy cannot bear—in the face of other urgent needs.

The lack of enough high-quality "nursing homes" and "homes for the aged", or their equivalent, drives up the costs of general hospital care. These costs already are at levels beyond the reach of most families without hospital insurance and at levels restricting the scope and volume of benefits afforded the insured. National estimates for 1952-53 show that insurance benefits covered less than 60 percent of their hospital expenses for nearly one in every five insured families.<sup>3/</sup>

The lack of enough high-quality institutions of the "nursing home" variety denies good care to hundreds of thousands of individuals. The National Survey has completed its first general estimates of chronic illness and disability in the population outside of institutions. According to the Survey, about 1,800,000 men and women over 65 years of age reported that they are completely limited in their activities because of chronic conditions. This is not to say that all are bedfast or unable to walk, and so on. It does mean that they are suffering from chronic conditions to the degree that normal family and vocational life is not possible,—and they are *in our local communities*.

- 1/ Fraenkel, M. and Erhardt, C. L.—  
Morbidity in the Municipal Hospital of the City of New York.  
Russell Sage Foundation, 1955.
- 2/ Unpublished data, courtesy of  
Dr. Walter L. Porteus.
- 3/ Anderson, O. W. and Feldman, J. J.:  
Family Medical Costs and Voluntary Health Insurance; A Nationwide Survey. Blackiston Division, McGraw-Hill 1956.

I do not imply that all of these should be in "nursing homes" or "homes for the aged." Far from it! But I repeat: the lack of enough such institutions of high quality reduces the chances of hundreds of thousands of them for normal life. In this group of 1,800,000 spread throughout the country, there are many whose families cannot afford skilled care at home. Many without families are eking out a lonely, marginal existence—unknown, unloved, unserved. A considerable proportion of those lost men and women would benefit greatly from care in a high-quality nursing home or home for the aged for at least some part of their remaining years.

The lack of enough high-quality institutions of the "nursing home" variety is costly in other ways. An employed member of the family may have to give up the job to care for an invalid, and sooner or later thereafter the family is thrown on public assistance. Yes, we have reasons to be disturbed about the dollar-price of our neglect of health services for the aging, for it touches everyone's pocketbook in one way or another.

But I would turn your minds and hearts to an older and nobler tradition implanted there by the faith of our fathers. It is that we care about people.

This is the fourth and last lesson that this Conference teaches—and must teach throughout our country—indeed, throughout the world.

The past twenty years have produced formidable changes in the whole fabric of our society. Some have bestowed inestimable benefits on mankind. Some have loosed destructive forces. Our material standard of living has been raised to unimagined heights. No one would deny the value of our expanding economy—or change it if we could. There has been a revival of religious faith—or at least a vastly increased church-going. There has been a striking alteration in the preceding pattern of family life toward younger marriages, larger families. The extreme mobility of the population has been, and continues to be, a disruptive phenomenon of the present age.

All these changes, I believe, we can

"take in our stride" if we recognize them and use our intellectual and spiritual gifts to direct them in beneficial directions. For these are dynamic changes—they are active, as opposed to static; they are stimulating as opposed to deadening.

But there is another sort of change, springing in part from some of the most widely approved dynamic processes. It is a subtle change, hard to define. For want of a more precise term, it is the widening "de-personalization" of our society.

The increasing automation of industrial and business operations and their counterparts in the mechanization of personal and family life, are not harmful in themselves. But this formidable, accelerating technology does have one effect of removing very large segments of the population from any direct participation in the basic communal activities of human society.

There is a gradual reduction of person-to-person contacts in community life. For example, the "milkman" was a well-known person a few years ago in small towns and large cities alike. Today, most families patronize the supermarket and take their half-gallon cartons out of self-service refrigerated bins.

Individuals and families are increasingly preoccupied with devices and products that permit them to have less and less contact with nature and with other human beings. Every city in the country endures its bumper-to-bumper line of automobiles, the majority of which transport a single individual to and from work in solitary splendor. Recreation is increasingly sought in the shadow world of television. There is less and less neighborly exchange of recipes, because so many food products are precooked, and whole meals can be purchased in packages.

Decisions affecting the entire population are made by a relatively few individuals in places far removed from the community. The exodus of industry from our oldest industrial area—New England—is an example of this separation of the people from personal participation in the communal life.

As cities grow and absorb neighbor-

ing rural areas, distances from residential areas to the center of community decision and action increase. There is a migration of younger members of the professional and managerial classes to the suburbs, thus depriving the central city of much of the personal concern of its leadership. For home is where the heart is. In such situations, and not alone in our largest metropolitan areas but in the burgeoning smaller cities, community functions tend to become concentrated in the hands of a few—often without the knowledge and consent of the community that must support the functions.

This aspect of "de-personalization" should serve as a continuous warning light to the health and welfare professions. Our functions are especially vulnerable, for society has vested in us considerable responsibility and authority. In the medical professions, it is a life and death responsibility. The formulation of community policies, the making of community decisions, must be distinguished from medical decisions with respect to the welfare of the individual patient. In the latter, medical judgment must prevail.

But in the making of community decisions, leaders in health and welfare—each and every one of us—must be severely self-critical lest we fall into the delusion that we are the community: we and the small group of business, civic, and other professional leaders who are our advisers and adherents.

This hazard in modern leadership challenges every leader and every leadership group repeatedly to seek personal contact with those whom we fondly believe are our "followers." For this shift toward "de-personalization" in our society is a deadening influence—not a dynamic change that can be channeled into beneficial action.

If this Conference could make only one contribution, I hope it would be to lift the deadening hand of "de-personalization" from planning and programs for the aging throughout our country. In doing so, you would release in our communities the most powerful force that mankind has developed—

the force of human affection and personal concern.

To accomplish this, we need to touch base constantly in these next few days with the realities of the problems we have come here to solve. Many of us in this room today are in positions that keep us far removed from these realities. Circumstances leave others no opportunity to come close to the human tragedies that illness and old age enact hour-by-hour, day-by-day in every American community.

Fortunately, we have with us many individuals whose daily experience is on the front line of need: practicing physicians, clergymen, social workers, visiting nurses who first see the stricken older person and mark the progression of his disability, the breaking of old patterns of living. Nurses and managers of nursing homes and homes for the aged who receive him when he has surrendered the last bulwark of independence.

We must turn to these front line workers again and again if we are to blaze new trails to better care and better health of patients in nursing homes and homes for the aged. Achieving this goal is not an easy task.

I come back to our guiding star—the little old lady in the nursing home. Keeping her in the center of our thinking, we'll find that the patient is often the first obstacle to be overcome. Don't think she wears a halo. Common sense tells us that a person so resistant to necessary change is not going to be an easy person to help.

Many of our older people, after retirement or the retirement of a spouse, live apparently in health for long periods of time before the enforced surrender of old patterns of living. We don't know much about what happens in this period of the later years. For until illness or accident really lays them low older people tend to stay out of sight, out of mind of others. They seem to adopt progressive withdrawal from the world around them. Their perception of themselves and others and their response to real-life situations seem to grow less acute. When illness is super-imposed—as inevitably it is—the beneficial effects of medical,

psychological, and social treatment are much more difficult to achieve in the resistant, withdrawn individual.

Often the family is another obstacle to better care and better health of an older person. Sometimes it's a daughter who has given the best years of her life to a tyrannical invalid, and now puts "Mother" in a nursing home with such highly charged emotion that her every visit brings on another crisis in the patient and the nursing home staff. Sometimes it's a son and daughter-in-law who deposit "Father" with ill-concealed satisfaction and are never seen again. Sometimes it's a congeries of nieces and nephews, scattered from Maine to California, each with growing families of their own; all more concerned with who is to claim "Auntie" or "Uncle" as an income tax exemption than with the kind of care their relative is receiving.

Finally, the community is the greatest obstacle of all to better care and better health of patients in nursing homes and residents in homes for the aged. The community is all of us—the health and welfare professions, the families, the older people, and other citizens in every walk of life.

The community, by its collective attitudes and resistance to change, has placed the nursing home and home for the aged in the same "withdrawn" situation that characterizes so many of the older people in these institutions. The community has allowed the remarkable scientific and technical advances of this century to by-pass the nursing homes and homes for the aged.

Deeply rooted in the community consciousness is the age-old dread of institutions. Until very late in the nineteenth century, the general hospital shared the same ill-repute as a "nursing home," the "county farm" and the "old folks home", as being a place for the sick poor to go—and die. Today the hospital is a place for all classes to go—and live.

But the nursing home and home for the aged still rouse in the public mind the same dread as nearly a century ago. They are still regarded as the point of no return. Yet the same

great advances in medicine, psychiatry, sociology, architecture, construction, equipment, and personal services which have revolutionized the community general hospital are applicable to the nursing home and home for the aged—as many existing institutions have demonstrated.

It is the main task of this Conference to find ways that will make *all* nursing homes and homes for the aged "a place for all classes to go—and live."

The highroad to that goal is through the heart of the community—of all of us. For all our technical and managerial talents will be of no enduring avail if they are applied without the concerned participation of the whole community.

In summary this Conference brings together a group of hardworking men and women with different vocational backgrounds to grapple with a common problem: the care of older persons in nursing homes and homes for the aged.

The contribution that each one makes depends not so much upon your individual experience and skill as upon your ability to work together—now and in the future. Your facility in breaking the barriers of "differences" in approaches, vocabularies, professional aims and traditional procedures will be increased, I believe, if your working sessions are pervaded by the following principles:

Keep the patient at the center of all your deliberations.

Neglect none of the zones that surround him—the individual institution, the local community, the state, the entire nation.

Respect every worthwhile effort, rejoice in every success by colleagues and be generous in correcting errors and retrieving failures.

Remember that there is no "ideal" pattern for nursing homes and homes for the aged in the vast kaleidoscope of health services for older persons, but rather an endless variety of patterns suited to particular circumstances.

Recognize the centrality of high quality facilities and services in the total economic and social problem of aging in our society.

Insist upon personal concern about people as a motivating force to overcome the deadening influence of "depersonalizing" forces in the community, so that no older person remains untouched by local love and knowledge.

With these principles as guides, I am confident that this Conference will achieve in the long haul far more than the specific goals outlined for it. The message you will take to your own

spheres of action and to our whole society will bring untold numbers of "idle spectators" straight into the ranks of those who work for better care in our nursing homes and homes for the aged. For no community—large or small—can remain indifferent when the call to action comes from men and women who are close, hearts and hands, to the human problems of old age.

## Notes and Comment

By the Editor

### FORM COUNCIL FOR HEALTH

The foundation was laid by some of the most important organizations in the health field to solve the problem of the health care of the aged.

For this purpose the American Dental Association, the American Hospital Association, the American Medical Association, and the American Nursing Home Association announced the establishment of the Joint Council to Improve the Health Care of the Aged.

Objectives of the council, the formation of which has been under consideration for some time by the sponsoring groups, were announced as:

"(1) To identify and analyze the health needs of the aged; (2) to appraise available health resources for the aged; and (3) to develop programs to foster the best possible health care for the aged regardless of their economic status."

The Joint Council to Improve the Health Care of the Aged is made up of three representatives of each sponsoring organization.

One of the first jobs of the council will be to determine exactly what are the health problems of the aged. Studies have been underway for the past several years by the organizations making up the council, but now through joint efforts, research will be intensified and projects for meeting the problem will be activated as rapidly as possible. The council will be the agency through which the efforts of

the sponsoring member organizations will be coordinated to solve the health problems of the aged.

The sponsoring organizations pointed out that the need for new programs in this field is accented by the fact that the life expectancy of individuals has been constantly increasing in recent years. In 1935 life expectancy in the United States was an average 60.2 years. The most recent figure indicates the average life expectancy now to be 70.0 years.

The council will have as one of its principal immediate projects the development of programs and facilities to be tailored to the health needs and finances of the aged.

Another facet of the council's broad-range program will be to work closely with health insurance groups in an effort to improve the coverage of the aged and to see that their insurance dollars go further.

It is the belief of the Joint Council to Improve the Health Care of the Aged that much can be done for older people by the states and communities, and the council will endeavor to stimulate the activities at these levels of government.

Special research projects are contemplated by each of the organizations supporting the council. This research will then be polled and programs developed to meet the health needs of the aged. The ultimate goal is to provide adequate health care at reasonable costs.

## PREGNANCY COMPLICATIONS

Premature births and complications during pregnancy may be factors in causing reading disorders among children.

This theory was advanced by Drs. Ali A. Kawi of New York and Benjamin Pasamanick of Columbus, Ohio, in the *Journal of the American Medical Association*.

Following a controlled study of 205 boys, ranging in age from 10 to 14 years, with known reading disorders, the doctors observed, "Children with reading disorders had a significantly larger proportion of premature births and abnormalities of the prenatal and paranatal periods than other control subjects."

Brain damage during pregnancy has been a factor in fetal deaths and it is known that such brain damage plays an important part in cerebral palsy, epilepsy, mental deficiency, and behavior disorders in childhood, the doctors said.

Since the brain plays a major role in our ability to read it was natural to assume that such damage to the brain during pregnancy could contribute to reading disorders in children.

This study, involving only boys, was conducted in Baltimore and included 205 children with reading disorders and a similar number, in the same age category, with normal reading behavior.

In addition to basic identification, the examiners obtained birth certificates, clinical information, and complete hospital birth records of each child studied.

The doctors found that "a total of 104 complications occurred among the group with reading disorders, as contrasted with 50 in the control group."

"Of the children with reading disorders, 16.6 per cent had been exposed to two or more maternal complications, as compared to 1.5 per cent among the controls," the doctors said.

Maternal complications appearing to be highly associated with reading disorders, according to the doctors, are "preeclampsia, hypertensive disease, and bleeding during pregnancy." The

three tend to produce an oxygen deficiency, the doctors said.

Since premature infants are most susceptible to oxygen deficiencies, it is interesting to note that 11.5 per cent of those children with reading disorders had been born prematurely. This compares with only 4.6 per cent of premature births in the control group. These premature percentages include only surviving infants.

As a result of their study the doctors concluded that the age of the mothers, number of previous pregnancies, length of labor, and the type of delivery are not contributing factors in reading disorders.

In the future, the doctors felt "efforts must be directed toward the eradication of maternal and fetal abnormalities, since these not only influence infant loss but also appear to have an effect on the surviving infant." This can be done, they added, by preventive measures and improved treatment during pregnancy.

## DIETARY TREATMENT

In the absence of a diagnosis demanding immediate surgery, medical treatment is recommended in cases of regional ileitis.

This report was made in the *Journal of the American Medical Association*.

The report was issued by A.M.A.'s Council on Drugs which feels that "regional ileitis is not entirely a surgical disease. In fact, the disappointment with the late follow-up of surgical intervention has more and more emphasized the need for a well-apportioned and carefully thought-out plan for the conservative medical treatment of this condition."

Ileitis, which usually begins in youth, is a low-grade disease of the small bowel, involving 8 to 16 inches of the terminal loop of the ileum. The disease is non-specific in nature and the cause is unknown.

In addition to the formation of a tender mass in the lower part of the abdomen, symptoms, according to the council, include diarrhea, abdominal pain, loss of weight, and a moderate secondary anemia.

Immediate surgery is deemed necessary when the following symptoms occur: appearance of abscesses and fistulas on the abdominal wall, intestinal hemorrhage, or intestinal obstruction.

Where surgery has been performed, recurrent ileitis is less severe than the original disease and can be treated conservatively.

Such treatment, which involves diet management, is the recommendation of the council when surgery is not necessary.

It includes an abundance of rest, both mental and physical, and fresh air. The diet should be generous and general, consisting of proteins, carbohydrates and, to a more limited degree, fats.

Above all, the council said, "a hopeful attitude looking to ultimate cure should be engendered. Most patients are ambulatory and may follow their profession or business activities in a somewhat limited fashion."

In addition to diet, a number of drugs are usually employed to control the symptoms of regional ileitis. Most, in themselves, are not curatives but go far in relieving the symptoms and, coupled with the proper dietary management, can lead to control of the disease.

### GLAUCOMA A THREAT

An increasing life span is contributing to an upswing in diseases common to our aging population.

Among the most feared of these is glaucoma, a common eye disease characterized by tension within one or both eyes, and with a high rate of incidence in persons past 40.

Writing in the *Journal of the American Medical Association*, three Memphis doctors estimate "one million persons over 40 in the United States have unrecognized glaucoma."

While tragic, this is a problem that could be eliminated, the doctors said, since early detection and treatment "can preserve vision for the lifetime of the individual."

Glaucoma, in its early stages, gives

no evidence of pain and there is no apparent loss of vision. For these reasons personal detection is almost impossible and the doctors recommend that an eye examination "be made a part of every general physical examination in persons over 40 years of age."

The simplest means for testing for glaucoma is the tonometer—an instrument for measuring tension in the eyes. Physicians can be taught to use the instrument after a brief period of instruction. Its use, the doctors said, "requires less time and no greater aptitude than obtaining the blood pressure."

Tonometry was used as the basis for a six-month glaucoma detection program conducted by Drs. Margaret E. Horsley, Philip M. Lewis, and Henry Packer at the John Gaston Hospital in Memphis.

All patients over 40 years of age admitted to the outpatient clinics of the hospital for any reason were tested by routine tonometry. The doctors felt that this program "would permit an early diagnosis of glaucoma to be made in a significant number of patients before they are aware of any visual loss."

More than 1,200 patients were examined in this manner. Four percent were found to have unrecognized glaucoma. The diagnosis by tonometry was confirmed by employing comprehensive tests commonly used in glaucoma detection.

Results of this program, the doctors said, indicate that routine determination of eye tension by tonometry "would be a major step toward avoiding much of the blindness resulting from glaucoma."

### DOCTOR GIVES SOME SOUND FACTS ABOUT SNORING

Something can be done about snoring, a Chicago otolaryngologist said recently.

Snoring is a "widespread complaint that afflicts only those who are not the patients" and only because they are "so unfortunate as to have good hearing," according to Dr. Noah D. Fabricant.

In fact, there are probably at least 21 million such afflicted people in the country, if it is assumed that the 21 million Americans who snore each disturb the sleep of one other person.

Writing in Today's Health, the American Medical Association's popular health magazine, Dr. Fabricant said snoring is generated while breathing in or out during sleep by several structures in the nose and throat.

The sounds are due to vibrations in the soft palate and other structures of the throat in response to inflowing and outflowing air. Vibration occurs when the soft tissues of the mouth and throat come close to the lining of the throat.

"In short, snoring can be compared to the noise made when a breeze causes a flag to flutter on a pole," Dr. Fabricant said.

Some of the ways in which it can be lessened and even cured are: removal of tonsils and adenoids, especially in children who snore; surgical correction of deformities which block the nose; treatment of allergy or infection which blocks the nose, and removal of polyps, benign jelly-like masses hanging in the back of the nose.

Many snorers do so only when lying on their backs. Such a sleeper should be made to change the position of his head to prevent his tongue from falling back. One way of doing this is to make it uncomfortable for him to lie on his back—usually by sleeping with a small pillow under the nape of the neck.

It is possible "to draw two sound conclusions about snoring," Dr. Fabricant said.

"The first is that snoring is repressible, even curable, when a definite cause-and-effect relationship is discovered. Something can be done about it.

"The other conclusion is that the agonized listener, helplessly adrift on a sea of snores, can always wear ear plugs when everything else fails."

#### **INTENT OF SUICIDE ATTEMPT INFLUENCES TREATMENT**

The distinction between a suicide and an attempted suicide should be

based on the intent rather than the outcome of the act, three Yale University psychiatrists said recently.

They believe that an attempted suicide is not really an effort to die. Rather the person hopes to bring about a change in his life through the effect of the attempt on the people around him.

Even if the person killed himself, the act would still be an attempted suicide, because he had some "desired effect" other than death.

A suicide, according to the doctors, is an act in which the only "desired effect" is death. Although the person fails to kill himself, the act would still be a suicide because he desired only death, the doctors said.

The distinction between an attempted suicide and a suicide is useful in deciding how to treat persons who try to kill themselves, the doctors said in Archives of Psychiatry and Neurology, published by the American Medical Association.

They studied 44 persons brought to the New Haven (Conn.) Hospital emergency room after they had attempted suicide.

Of these only eight had no "desired effect" from the attempt other than death. Seven of these were hospitalized, seven were diagnosed as psychotic and all eight were among the severer attempts (in the sense of place and method of the attempt).

For the other 36, some "desired effect" or change in their life situations could be found. For 34 of these, there were immediate changes in their lives which were brought about as a result of their attempting suicide. Only 11 of these were hospitalized for treatment.

In studying these attempts, the doctors sought information about where the patient made the attempt, whether he was alone, who discovered the attempt and how.

They found a characteristic sequence of events culminating in the achievement of the "desired effects." The patient was involved in a struggle with the persons important to him and sought changes in their attitudes or his relationships with them.

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## INFANT MORTALITY

Are Physicians Available?

BY CHARLES F. WILLIAMS, M.D.

State Board of Health

Raleigh, N. C.

North Carolina is a land of great variables. It varies in climate, from the cool mountainous southwestern section to the hot swampy northeastern. Its wealth varies from the large industrial cities to the practically barren beaches in the east. In education it varies from the large universities down to the little white one-room, dilapidated-looking school houses in other sections of our state. Insofar as medicine and medical care of the people are concerned, it varies a great deal also. There are no places for the teaching of pediatrics superior to the medical centers. And, at the other extreme, there is the gross superstition which we still find among numerous people—the use of the asafetida bag to prevent illness and

the wearing of the plugged penny around the infant's neck to help the child teethe have not been finished. Much to the distress of the people of North Carolina, the greatest infant mortality lies in those who still believe that the asafetida bag and the punched penny are all the cures needed.

Let us take a look into what the infant mortality is, where it occurs and what we can possibly do about it. We have made some progress—the infant death rates for several years were as follows:

1914	—90.3 per 1000 live births
1924	—82.3
1934	—77.9
1944	—45.4
1954	—30.1

LEADING CAUSES OF NEONATAL AND INFANT MORTALITY: NORTH CAROLINA, 1956

1,000 Live Births



In the last two five-year periods, 1951-55 and 1952-56, the infant mortality rate has dropped from 32.2 to 31.8. The 1951-55 figures, broken down, are: white, 21.4 — nonwhite, 48.4. We can see here that the progress that is being made is among the white chil-

dren and that our No. 1 problem in infant mortality is the nonwhite. It is here also that we have our greatest educational problem.

It is seen from the above chart that prematurity, asphyxia and atelectasis, birth injuries and congenital malfor-

mations are the big killers in the first 28 days. After the first 28 days, we see pneumonia and influenza as by far the largest problem. Why is this? With our new methods of treatment, antibiotics, oxygen, fluids, good medical care and good nursing care, why are these children dying? Are physicians unavailable? Are the antibiotics becoming ineffective? Are parents not bringing the children in early enough? Are parents insensitive to the suffering of the young? To these questions, I think a negative answer is apropos—

except to the question, "Are parents not bringing the children in early enough?"

This condition is far more prevalent than one would think. We will take, for instance, three different parts of our state. One is in the northeast, one in the southeast and one in the south-central. These are both rural and industrial areas. In looking at the statistics presented by the health officers of these counties, it is quite shocking to see the similarity although there is a difference in the percentage.

### Infant Mortality — 1954

#### Deaths According To Type Delivery — 1954

#### And Place of Death

	<i>Physician</i>	<i>Midwife</i>		
TOTAL -----	15 W 71 43 N 13 Ind.	1 W 16 N 6 Ind.		
Death—home -----	37 - 52.2%	22 - 95.7%		
Death—hospital -----	34 - 47.8%	1 - 4.3%		
No physician at death ---	14 - 19.7% } Physician day of death --- <td style="text-align: center;">46.5 } 19 - 26.8% } Physician prior to death ..</td> <td style="text-align: center;">17 - 74. % } 2 - 8.7% }<td style="text-align: center;">82.7</td></td>	46.5 } 19 - 26.8% } Physician prior to death ..	17 - 74. % } 2 - 8.7% } <td style="text-align: center;">82.7</td>	82.7
	38 - 53.5%	4 - 17.3%		

In the accompanying table, you will notice that the health officer has broken down the deaths into two categories—those children who were delivered by physicians and those children who were delivered by midwives. It is an endeavor here to break down the table into those who are financially and educationally better off than the others. The number of infants who died without care of a physician or those who died within an hour or so after the physician was contacted is self-explanatory in the chart. In talking to physicians in another section of the state, it was found that in many instances the parents did not bring the child in to see the doctor until the child was in

extremis or dead. In going over the diagnoses of the causes of death among these children, it was found that suffocation was quite a prominent cause. The histories of so many of these deaths showed that the parents put the children to bed at night seemingly in good condition and awakened the next morning to find them dead in their beds. It is very interesting that an autopsy was done on one of these children and it was found that the child did not die of suffocation, as was reported, but died of pneumonia. This is not an unusual finding. In the very young infant, the onset of severe influenza or certain types of pneumonia is very rapid in its ability to kill the

infant. It is on the basis of what we found in these statistics that we are endeavoring to make our next step in cutting down infant mortality in our state.

An experimental well-child clinic is being run by the Halifax County Health Department in conjunction with the Pediatric Department of Duke University. In this clinic, those in charge are endeavoring to teach the mother the rudiments of child care and feeding. They also are stressing to the mother that, upon the first sign of illness, she should take her child to a private physician and have him examined. The doctors and the nurses are endeavoring to stress the point to the mother that she should not do what "Granny" says and should not depend on asafetida bags and punched pennies for the welfare of her child. In addition to this concentrated effort to educate the mother, the child is completely stripped of his clothes and given a thorough physical examination by the resident

physician, who comes from Duke University. Also, a complete urinalysis and a hemoglobin determination are done on each new child patient and repeated when necessary. When this is completed, the mother is given an appointment to return to the clinic at a specified time and date. This clinic has been under way for approximately seven months, and great strides are being made. We hope that more clinics, modeled after this one, will be started throughout the state.

In conclusion, let it be said that the physicians of North Carolina are always available when they are needed, and that if we can educate the people to bring their children in to see the doctors while there is still time for them to aid them, we will cut down a great deal our infant mortality. It is also hoped that in the other well-baby clinics in our state there will be a concentration on telling the parents to take their children to private physicians when they are first taken sick.

## NOTES AND COMMENT

BY THE EDITOR

### INFANT MORTALITY

Infant mortality rates for the states and for the counties of North Carolina are on pages eleven and twelve. We are ashamed of our place among the other states of the Union for our rates. If these were mere numbers, it would not be so bad but unfortunately these rates represent people who were living and should be living now but who are dead. Duty, therefore, requires that we call these unpleasant facts to the attention of our readers.

In North Carolina, in 1956, of each 1000 live births more than 30 died before reaching the age of one year. In this year 3,333 young North Carolinians died under one year of age. The rate, to be exact was 30.9. Only six other states and the District of Columbia had higher rates. Alabama's infant mortality was identical with North Carolina's. In 1954 eleven other states

had higher rates than North Carolina; in 1955 seven.

In other fields of public health endeavor North Carolina stands well within the best one-third of the states on the basis of successful accomplishments. Why, then should we be near the bottom of the lowest one-third for infant mortality? It is true that we have made much progress during the last twenty years, but other states have done better than we have.

There is encouragement, however, in the work which is now being done by Dr. Charles F. Williams. His article in this issue of *The Health Bulletin* shows progress in making a diagnosis of our problem and hope that the demonstration in Halifax County will produce results. The provisional rates for infant and maternal deaths for 1957 are not likely to be materially changed when the final report is made. Of the coun-

ties having more than 1000 live births—22 have rates higher than 30. These are:

Burke	30.2
Catawba	30.2
Cleveland	32.8
Columbus	38.3
Craven	32.3
Davidson	30.8
Duplin	36.8
Forsyth	30.8
Halifax	53.0
Harnett	34.3
Iredell	32.7
Johnston	36.9
Lenoir	31.0
Mecklenburg	36.8
Nash	39.4
Richmond	32.0
Robeson	42.3
Sampson	33.5
Union	39.1
Wake	31.0
Wayne	35.0
Wilson	33.1

There were 13 counties with infant mortality rates less than that of the Nation. These are:

Alamance	24.5
Buncombe	22.0
Cabarrus	22.5
Caldwell	19.8
Edgecombe	25.9
Gaston	24.6
Guilford	23.8
Onslow	23.0
Pitt	24.3
Randolph	17.9
Rowan	23.7
Surry	23.1
Wilkes	24.6

It is pleasing to note that Onslow County again has a low rate. Several years ago Onslow's rate was excessively high. Something has happened in that county. For the last three years their infant mortality rates have been low. It will be interesting to watch for results in Halifax County where Dr. Williams is conducting a demonstration or rather an experimental well-child clinic.

When we consider maternal mortality, North Carolina looks bad as compared with other states in the Union. In 1956 only four other states,

Alabama, Georgia, Mississippi and South Carolina, had rates higher than North Carolina. Maternal mortality rates are computed on the basis of the number of mothers who die per 10,000 live births. Since no county in North Carolina has anything like 10,000 live births per year, it is hardly fair to pay much attention to the maternal rates by counties. In 1957 there were 57 counties in North Carolina which had no maternal deaths. There were ten counties in the state, however, which had two maternal deaths during the year: five had three; two had four; and three had five. Certainly some of these maternal deaths could have been prevented. Of the counties having more than two deaths, there were: Duplin—4, Forsyth—3, Guilford—5, Johnston—3, Lenoir—3, Mecklenburg—5, Northampton—3, Pitt—3, Robeson—4, and Wilson—5.

In Dr. Williams' paper you will note that immaturity was the principal cause of our high infant mortality rate, and that asphyxia and atelectasis were also highly fatal. Congenital malformations and birth injuries were also principal causes of early infant deaths. Thus we see a definite need for teamwork between the obstetrician and the pediatrician. The North Carolina State Board of Health has recognized this need. We have in Dr. Charles F. Williams, Consultant in Pediatrics, and Dr. James F. Donnelly, Consultant in Obstetrics, two superbly trained specialists who will make an intelligent and conscientious study of our problems. With better prenatal care, more skillful deliveries and a more intelligent understanding by our people of the needs of the young child, we can look forward with confidence that our statistical reports a few years from now will show definite improvement over our present data. We wish these young professional men success in making a diagnosis of our problems. When it comes to applying the treatment they will need help from all of us.

#### **CHEMICAL WARNING LABEL ADVANTAGES LISTED**

Warning labels against misuse of

possibly dangerous chemical products do not frighten away customers; do not give away trade secrets, and are useful even though children can't read them.

These refutations to oft-repeated objections to careful precautionary labeling of common chemical products were made by the secretary of the American Medical Association Committee on Toxicology in the A.M.A. Journal.

Bernard E. Conley, Ph.D., said "The fear that trade secrets are lost through label declaration . . . is ill-founded and happily fewer firms now have this attitude."

Experience has also shown that warnings against misuse do not frighten away customers but engender confidence that the product can be safely used if directions are followed.

Child poisoning occurs not because the children can't read the labels, but because harmful substances are easily accessible. The parent is not overtly careless but fails to realize that many familiar products are capable of harm. Label warnings would counteract this easy familiarity which breeds carelessness, Dr. Conley said.

A recent survey showed "a sketchy, nonuniform, and generally inadequate pattern" of labeling regulations at state and national levels.

In an attempt to provide more uniform labeling laws, the A.M.A. Committee has drafted a model law requiring precautionary labeling of dangerous substances in commercial, household, and industrial chemicals. The bill is presently being distributed. Interest in the bill has been expressed by a number of groups, including state legislatures and Congress.

In considering the provisions for a model law, the committee adopted a set of principles that are "reasonable and reflect current knowledge of the toxicity of chemicals and the conditions under which they are employed," Dr. Conley said. For example:

—Precautionary labeling should be applicable to all chemical products containing hazardous substances which are not now specifically regulated. The same labeling standards should apply

to chemicals for export as to those for domestic use.

—While exact standards of toxicity cannot always be established, they often can be based on animal tests since these provide a consistent and reliable index of poisoning properties of a chemical.

—The term "poison" should be abandoned in view of the wide variation in the term's legal and scientific definitions. In lieu of a generally accepted definition of poison, substances capable of serious injury or death to any age group are dangerous chemicals and should be so designated on the label.

—The labeling should be based on the anticipated degree of danger and should use words and symbols that indicate that degree.

In his conclusion, Dr. Conley noted that precautionary labeling of chemical products is not "an easy panacea" to the problem of accidental poisoning, but it will help increase public awareness of hazards and encourage careful handling and storage of many possibly harmful chemical products.

#### DOCTORS TELL SUMMER EATING RULES

Television, air conditioning, and eating between meals have combined to produce a new hot weather syndrome among children, two Dallas pediatricians said recently.

It is characterized by the "pale, flabby, tired child who has gained excessive weight during the warm weather because he has stayed in an air-conditioned house watching television most of his waking hours and has indulged in frequent between-meal snacks that have spoiled his appetite for well-balanced meals."

Poor appetite in the summer and faulty eating habits may result from uncontrolled use of cold, high-caloric drinks or food, from failure to take adequate exercise, and from overindulgence in between-meal snacks.

A procedure for avoiding these problems was outlined by Drs. Floyd N. Norman and Edward L. Pratt in a special report on feeding children during hot weather, prepared for the

American Medical Association Council on Foods and Nutrition. It appears in the A.M.A. Journal.

They first pointed out that hot weather imposes no special dietary requirements for children. They need the same well-balanced diet they always need, along with extra water. They do not need additional quantities of salt. Only adults under "conditions of great physical activity associated with extremely large outputs of sweat" need sodium chloride tablets.

The doctors pointed out that it is unwise for adults to condition children to dislike hot weather or to foist summertime food fads on them.

Their rules for maintaining good nutrition and eating habits among children are:

—The habit of vigorous outdoor activity should be continued or developed. Children do not mind hot weather unless they are conditioned to dislike it.

—Cool, but not cold, drinks are best, and, for the most part, water should be used to quench thirst.

—Between-meal foods and high-caloric drinks may have to be controlled.

—A short "cooling-off" and quiet period before meals may increase the child's appetite.

—Limiting of high-caloric foods, such as peanut butter and ice cream, may be necessary.

—The large and better balanced meal may best be served in the evening when the temperature is lower.

—All of the usual measures and guides for developing good eating habits should be continued, irrespective of the weather.

They noted that if infants and children eating well-balanced diets do not tolerate ordinary heat, they should be examined for illness rather than changing their diets.

The authors are affiliated with the department of pediatrics, University of Texas Southwestern Medical School, the Children's Medical Center, and Parkland Memorial Hospital, Dallas.

## NEW HOSPITAL CARE PLAN OUTLINED

A hospital care plan that could set off "a chain reaction of improved hospital care" is now underway in the town of Manchester, Conn., according to an article in the Journal of the American Medical Association.

Since April 1957 the Manchester Memorial Hospital has been achieving "remarkable results" for patients and physicians in an entirely new approach to hospital care called "progressive patient care," according to an editorial in the Journal.

It is a comprehensive system designed to adapt hospital facilities to the patient, rather than the other way around. The Manchester plan may "foreshadow new thinking, new planning, and new policies in many of the 7,000 hospitals in the country," the editorial said.

A special article in the Journal explained that the Manchester plan is a three-phase program of gradually placing the patient in transition from special surveillance to self-help. Or it may work in reverse—from a diagnostic work-up in the self-help unit, to surgery and the intense care unit, and then back to self-service by way of an intermediate care unit, the article said.

Each unit is equipped and staffed according to the needs of the patients it serves.

Progressive patient care at Manchester was soon providing "a higher level of service in a shorter period of time," the article said. Last July, encouraged by preliminary results, the U.S. Public Health Service decided to finance a detailed and continuing study of the Manchester experiment by a team of experts. There were to be no recommendations—just scrutiny of the system in operation.

Meanwhile, the idea was fast becoming known in scattered parts of the nation. By February, 1958, there were reported to be 30 hospitals in the country handling patients in stages similar to the Manchester plan and recently the Public Health Service found nearly 150 hospitals doing it.

Some of the beneficial changes that

may result from the plan, according to the article, are:

—Because only the doctor would decide when his patients were ready for transfer from one unit to another, he would be brought into more intimate contact with the hospital than he is under most existing conditions.

—Installation of expensive equipment in only one section of the hospital, the intensive care unit, would bring about substantial reduction in over-all construction and operating costs. Design and architecture of the buildings also would be changed greatly.

—In turn, this prospect of accumulated savings might very well bring costs within the means of communities which now are struggling with the problem of financing new hospitals or enlarging existing ones.

—Concentration of the most thoroughly trained nurses and ancillary medical personnel in the intensive care units would allow more effective use of their skills. This is particularly important at a time of severe shortages in these fields.

—Individual patient costs could be less, because of varying room rates. The scale at Manchester is \$22 a day for the intensive care unit, with continuous nursing surveillance, \$16 for the intermediate care unit, and \$8 a day for the self-service unit, where service by a registered nurse is minimal, and the patient is able to care for himself.

While individual costs may be less under progressive patient care, its really big advantage lies in much better care for the patient's dollar, according to Dr. Edward T. Thomas, the director of the U.S. Public Health Service study.

#### MAJOR HEALTH ORGANIZATIONS ANNOUNCE PROGRAM FOR AGED

Better health care for the nation's 14 to 15 million aged is the goal of a comprehensive program announced by the Joint Council to Improve the Health Care of the Aged.

The council's attack on the more knotty problems of health care for the aged is designed to: (1) increase opportunities for older people to obtain

voluntary health insurance coverage, (2) expand health care facilities tailored to the needs of the aged regardless of economic status, and (3) develop more community health services for the aged.

The program will be implemented through the active and aggressive leadership of the council's four sponsoring organizations—the American Dental Association, American Hospital Association, American Medical Association and the American Nursing Home Association.

"Member organizations of the Joint Council," said Dr. Edwin L. Crosby, director of the American Hospital Association and interim secretary of the council, "have already undertaken studies and work projects aimed at improving the health care of the aged." Among the many activities which these groups have undertaken or in which they have cooperated he listed the following:

(1) The American Hospital Association, in cooperation with the Public Health Service, is conducting a conference on the care of patients with long-term illnesses.

(2) An American Medical Association committee is working with the American Nursing Home Association in preparing upgraded standards for nursing homes which will result in improved nursing home care for the aged.

(3) A National Conference on Home-maker Service is being arranged under the joint auspices of the Department of Health, Education and Welfare and twenty-six national voluntary organizations, including the American Medical Association. This project is aimed at reducing the financial expense of disabling illness among the elderly by performing the necessary household tasks to enable them to remain at home among their families and friends, with qualified nursing and medical attendance in the home.

(4) Six regional conferences have been held under the auspices of the American Medical Association to help doctors cope with problems of the aged, and a national conference will be held in September.

The Joint Council will appraise the success of these programs and seek their application through united effort.

"The long-range aim of the council is better health for all the aged," Dr. Crosby asserted. "This can be achieved by helping everyone to prepare thoroughly his life for the later years. Our more immediate concern is better care for the aged who are chronically ill, and better ways to meet the financial and social problems that accompany such illness."

He said: "The Joint Council has found that sufficient up-to-date information concerning the problem is not available. A series of research projects has been launched to pinpoint the problems that require the most urgent attention.

"In addition," he continued, "the Joint Council will seek the expansion and improvement of health care facilities by encouraging legislative action to accelerate construction and remodeling of hospital and nursing home facilities for the aging."

To better meet the problems of the financial expense of prolonged hospitalization for chronic illnesses, the Joint Council is working with the voluntary health insurance industry, including Blue Cross and Blue Shield prepayment plans, to accelerate and broaden their programs that have already resulted in some degree of coverage of 6 million persons over 65 in a few short years.

The Joint Council has emphasized the need for state and local governments to assume their proper responsibility to indigent patients, by providing realistic financial support for medical, dental, hospital and nursing home care for the aging who are unable to pay.

Dr. Crosby said: "The broad health care plan of the Joint Council includes an educational program at the national, state, and local levels. Its purpose is to make all citizens aware of the growing health problems of the aging and what can be done by the individual to assist

in this field. The council plans to enlist the continued aid and support of America's voluntary community organizations."

#### IVY POISONING

Do you know how to protect against ivy poisoning? It's a year-round hazard most common during summer, according to the National Safety Council.

Ivy poisoning is a term used to refer to skin irritation resulting from contact with any one of more than 60 varieties of plants found in the United States.

Most persons are immune to the biggest share of them, the Council said. But nearly everyone who touches the three more commonly known plants—poison ivy, poison oak and poison sumac—is affected to some degree.

Such poisonous plants are the bane of outdoor workers. There's even risk for garage mechanics, golfers—and dog-lovers!

In one year more than 2,000 employees of the Connecticut State Highway Department contracted ivy poisoning, losing from two to five days of work. This despite a program of inoculations, eradication of roadside growths of the plants and years of experience in detecting them.

There are cases on record of garage mechanics getting the rash from working on an auto that had come in contact with the irritation-producing plants. Golfers, too, have picked it up when they handled a golf ball that had crushed leaves of one of the three plants.

And, of course, there are instances of dog-lovers coming down with ivy poisoning after petting Fido—who just frolicked in the stuff.

Ivy poisoning is caused four ways, the Council pointed out. These include bodily contact with any part of the plant, exposure to smoke from the burning plant, contact with clothing or other objects that have been exposed to it and wading or swimming in water containing its oil.

**RESIDENT LIVE BIRTHS, INFANT DEATHS, AND MATERNAL DEATHS WITH RATES:  
UNITED STATES AND EACH STATE, 1956**

(Infant mortality rates per 1,000 live births.  
Maternal mortality rates per 10,000 live births.)

Area	Live Births	Infant	Maternal	
	Number	Deaths*	Deaths	Rate
United States.....	4,103,090	108,183	26.0	4.1
Alabama.....	84,062	2,599	30.9	7.7
Arizona.....	29,736	900	32.3	4.4
Arkansas.....	42,510	1,092	25.7	6.1
California.....	333,946	8,065	24.0	3.1
Colorado.....	41,600	1,211	29.1	3.1
Connecticut.....	53,774	1,174	21.8	3.0
Delaware.....	11,216	271	24.2	2.7
District of Columbia.....	20,518	688	33.5	5.8
Florida.....	97,396	3,093	31.8	6.1
Georgia.....	102,874	3,094	30.1	8.7
Idaho.....	16,628	371	22.3	1.8
Illinois.....	229,760	5,639	24.5	2.9
Indiana.....	113,620	2,763	24.3	3.1
Iowa.....	63,476	1,305	20.6	2.0
Kansas.....	53,318	1,242	23.3	3.6
Kentucky.....	73,980	2,132	28.8	5.8
Louisiana.....	89,448	2,721	30.4	5.1
Maine.....	22,368	551	24.6	4.9
Maryland.....	70,752	1,837	26.0	3.0
Massachusetts.....	112,162	2,512	22.4	1.5
Michigan.....	206,226	5,062	24.5	3.9
Minnesota.....	83,006	1,776	21.4	1.3
Mississippi.....	62,080	2,352	37.9	11.4
Missouri.....	96,132	2,353	24.5	5.3
Montana.....	17,732	494	27.9	1.7
Nebraska.....	33,994	774	22.8	3.8
Nevada.....	6,572	222	33.8	4.6
New Hampshire.....	12,984	282	21.7	1.5
New Jersey.....	125,084	3,033	24.2	2.8
New Mexico.....	26,884	965	35.9	3.3
New York.....	346,938	8,235	23.7	3.7
North Carolina.....	116,274	3,594	30.9	7.0
North Dakota.....	16,694	414	24.8	1.2
Ohio.....	235,020	5,805	24.7	3.5
Oklahoma.....	51,784	1,375	26.6	3.1
Oregon.....	38,610	888	23.0	2.1
Pennsylvania.....	248,524	6,097	24.5	3.5
Rhode Island.....	18,174	439	24.2	1.7
South Carolina.....	64,216	2,069	32.2	8.4
South Dakota.....	18,020	420	23.3	2.2
Tennessee.....	84,958	2,334	27.5	5.4
Texas.....	246,296	7,262	29.5	5.4
Utah.....	25,548	558	21.8	2.3
Vermont.....	9,246	223	24.1	3.2
Virginia.....	96,870	2,870	29.6	4.7
Washington.....	65,084	1,526	23.4	1.7
West Virginia.....	44,606	1,122	25.2	4.0
Wisconsin.....	93,856	2,143	22.8	1.9
Wyoming.....	8,474	236	27.8	2.4

\*Excludes fetal deaths

Source: National Office of Vital Statistics

PHSS: April 2, 1958

**RESIDENT LIVE BIRTHS, INFANT DEATHS, AND MATERNAL DEATHS WITH RATES\*:  
NORTH CAROLINA AND EACH COUNTY, 1957\*\***

Area	Live Births				Infant Deaths				Maternal Deaths				Area	Live Births				Infant Deaths			
	Number	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number		Number	Rate	Number	Rate	Number	Rate	Number	Rate
North Carolina	112,770	3,438	30.5	81	7.2								Johnston	1,302	48	36.9	3	23.0			
Alamance	2,038	50	24.5	—	—								Jones	312	10	32.1	—	—			
Alexander	359	13	36.2	1	27.9								Lee	741	30	40.5	—	—			
Alleghany	115	6	52.2	—	—								Lenoir	1,579	49	31.0	3	19.0			
Anson	667	30	45.0	1	15.0								Lincoln	631	10	15.8	—	—			
Ashe	427	16	37.5	—	—																
Avery	291	5	17.2	1	34.4								McDowell	593	15	25.3	—	—			
Beaufort	934	34	36.4	1	10.7								Macon	284	5	17.6	—	—			
Bertie	710	23	32.4	2	28.2								Madison	315	12	38.1	—	—			
Bladen	772	38	49.2	—	—								Martin	735	27	36.7	—	—			
Brunswick	541	25	46.2	1	18.5								Mecklenburg	6,768	249	36.8	5	7.4			
Buncombe	2,633	58	22.0	—	—								Mitchell	316	9	28.5	—	—			
Burke	1,028	31	30.2	—	—								Montgomery	472	16	33.9	1	21.2			
Cabarrus	1,508	34	22.5	—	—								Moore	968	22	22.7	—	—			
Caldwell	1,211	24	19.8	—	—								Nash	1,547	61	39.4	—	—			
Camden	137	6	43.8	—	—								New Hanover	1,804	50	27.7	1	5.5			
Carteret	692	15	21.7	—	—								Northampton	743	19	25.6	3	40.4			
Caswell	484	13	26.9	—	—								Onslow	2,957	68	23.0	—	—			
Catawba	1,722	52	30.2	—	—								Orange	1,035	30	29.0	—	—			
Chatham	571	19	33.3	1	17.5								Pamlico	208	5	24.0	—	—			
Cherokee	337	5	14.8	—	—								Pasquotank	721	28	38.8	1	13.9			
Chowan	423	12	28.4	1	23.6								Pender	460	21	45.7	1	21.7			
Clay	132	2	15.2	—	—								Perquimans	246	12	48.8	—	—			
Cleveland	1,614	53	32.8	2	12.4								Person	747	14	18.7	—	—			
Columbus	1,330	51	38.3	—	—								Pitt	1,810	44	24.3	3	16.6			
Craven	1,918	62	32.3	1	5.2								Polk	216	8	37.0	—	—			
Cumberland	4,759	127	26.7	2	4.2								Randolph	1,340	24	17.9	—	—			
Currituck	160	2	12.5	—	—								Richmond	1,030	33	32.0	—	—			
Dare	108	3	27.8	—	—								Robeson	2,863	121	42.3	4	14.0			
Davidson	1,816	56	30.8	1	5.5								Rockingham	1,640	46	28.0	1	6.1			
Davie	342	9	26.3	—	—								Rowan	1,727	41	23.7	1	5.8			
Duplin	1,059	39	36.8	4	37.8								Rutherford	967	27	27.9	2	20.7			
Durham	2,667	70	26.2	—	—								Sampson	1,255	42	33.5	—	—			
Edgecombe	1,547	40	25.9	1	6.5								Scotland	713	27	37.9	2	28.1			
Forsyth	4,353	134	30.8	3	6.9								Stanly	841	18	21.4	1	11.9			
Franklin	702	25	35.6	2	28.5								Stokes	459	8	17.4	1	21.8			
Gaston	3,010	74	24.6	—	—								Surry	1,083	25	23.1	—	—			
Gates	227	12	52.9	—	—								Swain	232	5	21.6	—	—			
Graham	131	2	15.3	—	—								Transylvania	374	3	8.0	—	—			
Granville	762	29	38.1	—	—								Tyrrell	117	2	17.1	—	—			
Greene	516	22	42.6	1	19.4								Union	1,074	42	39.1	—	—			
Guilford	5,808	138	23.8	5	8.6								Vance	811	34	41.9	1	12.3			
Halifax	1,717	91	53.0	—	—								Wake	3,963	123	31.0	2	5.0			
Harnett	1,138	39	34.3	1	8.8								Warren	492	16	32.5	2	40.7			
Haywood	887	33	37.2	—	—								Washington	396	16	40.4	2	50.5			
Henderson	750	20	26.7	1	13.3								Watauga	353	8	22.7	—	—			
Hertford	634	28	44.2	—	—								Wayne	1,992	70	35.1	2	10.0			
Hoke	540	26	48.1	1	18.5								Wilkes	1,018	25	24.6	—	—			
Hyde	127	7	55.1	—	—								Wilson	1,512	50	33.1	5	33.1			
Iredell	1,499	49	32.7	—	—								Yadkin	509	11	21.6	—	—			
Jackson	362	3	8.3	—	—								Yancey	284	4	14.1	—	—			

\*Infant deaths per 1,000 live births; Maternal deaths per 10,000 live births

\*\*Data are provisional and include receipts through January 1958 for 1957 occurrences

PHSS: March 26, 1958

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**G. GRADY DIXON, M. D.**  
**1890 - 1958**

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## In Memoriam: G. Grady Dixon, M.D., 1890-1958

By John R. Bender, M.D., Vice-President  
North Carolina State Board of Health

With reddened eyes and tear stained cheeks, Louise told me Wednesday night (May 7) of the call she had just received from Dr. Moore, telling of Dr. Grady Dixon's death. The news hit me as almost unbelievable, because just a few hours before, I was with Grady and he was apparently hale and hearty. He presided at the conjoint session of the State Society, Wednesday morning in his usual jocular manner. At no time did he appear to be ill or uncomfortable, and we parted with jovial comments about attending the Mountain Assembly in June.

Time and again during the course of the evening, Louise and I would give expression to our bereaved emotions and remark, "It just can't be, it can't

be true." But it was true! Dr. Grady Dixon died suddenly en route from the Meeting of the State Medical Society. His death was an epitome of the life he lived; quiet, unpretentious, sociable and active in organized medicine.

Grady was as individualistic as the banks of the Pamlico and as rugged as the soil of the Tar Heel State he loved. His eastern Carolina drawl, his unsurpassed humor and home-spun philosophy made him a most personable character, known far and wide, and a good will ambassador for the profession of Medicine, the Fraternal Order

(The accompanying tribute to the late President of the North Carolina State Board of Health was published originally in the Tar Heel practitioner, of which Dr. Bender is editor. It is reprinted here by special permission.)

of Masonry, The Civic Organization of Rotary and the Christian Faith. Grady was active in any organization with which he was affiliated, and he was among the first in his community to extend the hand of service to those in need.

Dr. Dixon was at his highest degree of professional decorum and sympathetic understanding when the State Board of Health was deliberating a touchy problem that was to directly involve the welfare and behavior of others. He could disagree without being disagreeable and never allowed differences of opinion to deter his objective or dilute his friendliness. He was quick to sense any piquancy and would forthwith tell one of his "homespun" yarns for which he was noted, and ere the mischievous twinkle of his eye had faded, the fellowship of the group jelled into a spirit of friendliness and tolerance toward the thinking of one another.

Grady was blessed with a sense of humor which afforded levity for those with whom he might associate, and as he knew no strangers, "he could walk with kings, nor lose the common touch." His friends were legion and to them his memory will be legendary.

Any attempt to eulogize his life is but a feeble attempt to describe the intangible personality of the man. He wrote his own eulogy in the hearts of his friends and no better testimonial can be given than was to be found at his graveside, Saturday afternoon, inscribed in the hundred of eyes, swollen with tears and voices choked with sobs by their sorrow of his death. There an overflow crowd of friends from all walks and stations of life, including college presidents, political figures, state officials, day laborers, patients and friends gathered to pay homage to the mortal remains of this great man. And no one was ashamed to shed a tear of sorrow in recognition of his passing from our earthly abode to that realm of Celestial immortality.

That was our tribute to you Dr. G. Grady Dixon, and in our sorrow, we gave thanks that we had been privileged to know you and count you a personal friend.

The North Carolina Academy will continue to mourn our loss created by his death and we extend to Julia and his sons and to the immediate family and his many friends, our heartfelt sympathy.

## A Decade of Public Health Adjustment in North Carolina\*

By J. W. R. Norton, M.D., M.P.H., R.A.C.P.\*\*

In the decade just past many public health adjustments have been made to shift emphasis from, though not neglect, major problems of the past and to recognize and move against those of today which appear as impregnable as the combined communicable diseases seemed fifty years ago.

We should pause to consider the direction of changes. Have the adjustments been maximally constructive? Have they been timely, effective, in the interest of efficiency and long-range

economy? Will reduction of these present major health problems actually contribute to freedom of fee-for-service private medical practice as did the teamwork reduction in communicable diseases?

As background for consideration for this decade of public health adjustments we observe that in many ways we find ourselves now faced with a situation similar to that presented a half century ago by communicable diseases rampant in communities unprepared for the crowding conditions. Medical leaders, particularly those familiar with and responsive to public health responsibilities, recognized the

\*Presented before the Conjoint Session—Medical Society of the State of North Carolina and the State Board of Health, Asheville, May 7, 1958.

\*\*Secretary-Treasurer and State Director, N. C. State Board of Health, Raleigh.

situation as intolerable. They, along with women leaders and business and industrial leaders, proceeded to do something about it. Research and its prompt and wide application were supported. Tuberculosis, pneumonia, the filth-borne intestinal diseases and insect spread diseases along with maternal and infant-childhood cripplers and killers were brought under relative control.

Today an equally intolerable situation exists in our deaths, our crippling and staggering economic burden from diseases of the heart and blood vessels, cancer, arthritis, obesity, diabetes, nephritis, accidents and mental disorders. Most viral infections are unresponsive to present miracle drugs and staphylococcal infections and other serious disorders may follow the use of some.

Coordinated, intelligent, and unselfish teamwork was effective against the common infections. Progress was slower than it need be now since we can avoid some of our earlier mistakes. It should not be considered heresy to consider teamwork desirable against our present intolerable situation with degenerative diseases, accidents and mental disorders. Fee-for-service private practice will retain its relative freedom far more effectively through again welcoming intelligent teamwork than by striking blindly at friend and foe alike as third party encroachers.

Three major overall public health adjustments have occurred during the decade:

1. Administrative reorganization in 1950 reducing the divisions from fourteen to seven with Water Pollution Control, the eighth, added in 1957;
2. Recodification revision of public health laws by the 1957 General Assembly; and
3. Combined budget—federal, state, local—increased from \$2,684,277 for fiscal 1948 to \$10,960,027 for fiscal 1958.

During this time the State staff has increased 246 to 380 and local em-

ployees from 878 to 1186. Funds to private physicians with assisting personnel and hospitals have increased from \$371,177.00 to \$1,057,447.00 or 184.9%. Federal funds have increased \$2,421,209.00 to \$3,007,784.00 or 24.2%. State funds have increased \$862,264.00 to \$2,993,810.00 or 247.2%, and local funds have increased \$2,125,385.00 to \$5,334,965.00 or 151.0%. It is also noteworthy that the Cooper Memorial Health Building was completed and occupied in 1954 and will be fully air conditioned next month. Our most severe polio epidemic of 1948, the series of hurricanes in 1954 and 1955 and the Asian influenza outbreak of 1957 have presented emergency challenges that have put North Carolina's State Board of Health and local health departments to acid tests. We serve many agencies to avoid costly duplication.

In our State Board of Health Administration there are eight major divisions comprising about thirty sections. These divisions are: Central Administration, Epidemiology, Laboratory, Local Health Administration, Oral Hygiene, Personal Health, Sanitary Engineering and Water Pollution Control.

## I. CENTRAL ADMINISTRATION

Central Administration has been directly under the State Health Director until a week ago when a Director of Administrative Services was employed. One of the earliest changes made almost ten years ago was to streamline and centralize budget operations, mailing, shipping and receiving and also central files, multilithing and the film library and personnel.

The Publicity Officer added in 1953 the Asheville Station WWNC to his regular weekly broadcasts over WPTF. He has been increasingly helpful in Medical Society as well as Health publicity particularly for meetings and feature articles.

The Medical-Public Health Library was established in 1954 by a grant from the Z. Smith Reynolds Foundation. Visits to the Library, loans of material

and assistance in organization and preparation of presentations have about doubled over the second year of operation.

## II. EPIDEMIOLOGY

In addition to vital statistics, communicable disease control, occupational health, general disease control and tuberculosis control, the following sections have been added:—1951 Veterinary Public Health; 1954 Accident Prevention (Home and Farm); and 1957 Chronic Disease-Radiation.

During the 10-year period only four cases of smallpox have occurred in the State, three cases in 1948 and one case (transient; exposure unknown) in 1953. Typhoid fever has shown a consistent annual decline from 56 cases reported in 1948 to 23 in 1957. Malaria has declined from 147 cases of local origin in 1948 to 48 in 1953 and none in 1957. Diphtheria has declined from 485 cases reported in 1948 to 49 cases in 1957. Tuberculosis deaths have declined each year from a total of 1128 in 1948 to 224 in 1957, a decrease of 80 per cent. During the ten-year period 2,656,234 persons have been chest x-rayed for the detection of tuberculosis under the Board's mass x-ray program. The continuation of an intensified venereal disease control program during and following World War II, was responsible for a consistent annual decline through 1953 when an all-time low of 3,682 cases were reported. The over-all decline of infectious syphilis during the 10-year period was from 7,313 cases reported in 1948 to 5,440 cases reported in 1957, an average annual decrease of 873 cases for the period.

As a result of the shortage of personnel during and following World War II, our occupational health program was curtailed to the extent that supervision could be provided for only the dusty trades and for emergencies resulting in other occupational health hazards. During the past three years, this Section has been restaffed to a full complement of trained occupa-

al health workers, provided under an increased budget and including a medical director, two engineers, one associate industrial hygienist, an occupational health nurse, and supporting clerical personnel. The occupational health program within the past three years has broadened its scope of activities to provide advisory and supervisory service to many industries other than the dusty trades, including periodic investigations of hazards in the chemical, metallurgical, textile, and other industries. Also, it is investigating radiation hazards incident to defective x-ray machines owned and operated by State and local health departments. The new Chronic Disease-Radiation Section is coordinating services in these important areas. An Advisory Study Committee on radiation protection has been set up to aid the State Board of Health particularly in developing proposed laws and regulations.

Our Veterinary Public Health Section has been most effective in the promotion of a State-wide rabies control program involving the adoption of local ordinances requiring the registration and vaccination of all dogs in the State and the destruction of strays. Psittacosis control, anthrax control, studies of equine encephalitis, and brucellosis have been problems of special concern to the Section, each of which has necessitated special investigations and control measures.

A State-wide educational program relating to the prevention of home and farm accidents has been considered of great importance to the people of the State, as accidents, exclusive of motor vehicle accidents, are now responsible for more deaths than the combined total of deaths from all acute communicable diseases and are largely preventable. This program initially supported by a Kellogg Foundation grant, has been actively promoted during the past three years as a special service carried out under the comparatively newly organized Accident Prevention Section.

An automobile crash injury study in cooperation with private physicians, the Motor Vehicles Bureau, hospitals and Cornell University was begun with federal funds as the pioneer state in September 1953. Since then Ford and Chrysler have made grants and all manufacturers are utilizing data to build greater safety into their vehicles.

After years of frustrating stimulation of fear through selfish publicity and the desperation use of ineffective gamma globulin in 1952-1953, Salk poliomyelitis vaccine was first used on a field trial basis in 1954. The State Board of Health has carried out an active poliomyelitis vaccination program for children under twenty years of age, and for pregnant women. Since the beginning of the State-wide program in April 1955 through March 15, 1958, a total of 3,127,443 inoculations have been given by and through local health agencies with vaccine purchased by the use of Federal funds and distributed by the State Board of Health. A total of 1,244,780 persons have received one inoculation, 1,079,545 have received two inoculations, and 803,118 or 46.8 per cent of the eligible child population have received three inoculations. These inoculations are exclusive of children vaccinated by private physicians as paying patients. The poliomyelitis vaccination program has resulted in our having only 229 cases in 1957, the lowest since 1948, which was an epidemic year with 2,516 cases reported. Three hundred fifteen (315) cases were reported in 1956. The paralytic cases reported in 1957 totaled 53 as compared to 179 in 1956. In 1958, through today (May 7), no poliomyelitis which had its onset during the year, has been reported, but one possible case (onset April 19) is being investigated.

During 1957 the Public Health Statistics Section rendered services to Committees of the Medical Society of the State of North Carolina in personnel, tabulating, materials, equipment and

supplies costs in the amount of about \$2,300.00.

### III. LABORATORY

Through its half century of services the State Laboratory of Hygiene has had only two directors. Among new activities since 1948 have been, as usual, many of great assistance to private physicians throughout the State.

#### Bacterial and Viral Activities:

1. Anti streptolysin O titer testing of blood.
2. Phage typing of staphylococci.
3. Complement fixation tests for viral and rickettsial diseases.
4. Complete typing of salmonella and shigella groups.
5. Leptospira agglutinations.
6. Viral isolation laboratory.
7. Quantitative determinations on all positive reactors to VDRL test for syphilis.

#### Chemical Activities:

1. Spectrograph laboratory for chemical analysis.
2. Radiological laboratory for measuring radioactivity in water, foods and other materials.
3. Total proteins on spinal fluids.
4. Blood sugar determinations in diabetic surveys.

#### Other Activities:

1. Cancer cytology laboratory.
2. Certification of milk laboratories as examining milk in accordance with Standard Methods.

### IV. LOCAL HEALTH ADMINISTRATION

Direct State aid to counties ten years ago was \$350,000, half of which was earmarked for venereal disease control for seventeen counties. The 1949 General Assembly increased State aid to counties by \$800,000 and in July of that year the last four counties began local health department services. This year the local health service budget was \$6,905,785.17 with 77.2% from local sources. During the decade local support has increased 151% and State aid has increased 377% while federal funds have decreased 48% due partly to greater insistence on categorical use

of specialists. Increased local health services, personnel and salaries have been borne largely by increased local funds during the past four bienniums.

Increased emphasis has been placed on health education as services have more and more shifted from those for people to those with people and requiring their understanding and participation—individually and as communities.

The School Health Coordinating Service was strengthened in 1949 by a yearly appropriation to the Education Department for \$550,000—reduced since 1955 to \$425,000 annually. The State Board of Health has provided a slightly smaller amount and the finding and correction of defects among those least able to pay has stimulated similar action among those who pay their own bills.

Public Health nursing has been strengthened in training and salaries and the number has increased from 380 local, 7 state, in 1948 to 501 local, 14 state, in 1958. Local nurse supervisors have increased 19 to 37. Specialized nursing consultation has developed from Maternal and Child Health, Planned Parenthood and Occupational Health to Nursing consultation in Pediatrics, Heart, Cancer, Mental Health and Crippled Children's programs. Changes in Public Health Nursing during the past ten years include: (1) Public health nursing care to the chronically ill by referral systems from hospitals; (2) Mental health concepts have integrated throughout all nursing services; (3) School health services are more extensive; (4) Increased services in clinics and schools have resulted in more selective home visitation; (5) Less time is required for communicable disease control nursing but an increase for immunization for poliomyelitis, assistance in supervision of premature infants, rheumatic fever nursing services, speech and hearing control work and more effective tuberculosis nursing supervision.

On July 1, 1949, the State Mental Health Authority was transferred from

the Hospitals Board of Control to the State Board of Health. In 1948 there were seven poorly staffed clinics in six communities. We have attempted to develop mental health services in all local health departments utilizing the 80 physicians and over 500 registered nurses working in this new field as has been done effectively for many years, in tuberculosis control. There are now 9 full-time clinics, the older ones being well-staffed and one has been approved as a training center by the American Association of Psychiatric Clinics for Children. A training program for mental health workers has expanded through stipends to mental health students but more spectacular has been the development of training facilities. Today one clinic provides training for all mental health disciplines, another for clinical psychologists, and four others for psychiatric social work students. The Mental Health Section has received recognition for initiating the two-week Pisgah View Community Mental Health Workshop in Western North Carolina which is probably the only one of its kind in the country. Last year a plan was developed with the four State Mental Hospitals whereby local health nurses assist mental patients and their families to adjust properly prior to and following hospitalization. In order to provide these nurses with some of the methods and skills necessary for helping in these situations 138 from the seven counties now participating have been given one and two weeks orientation courses at Dix Hill Hospital. If these pilot project methods prove helpful, this vital service should be extended to other local health department nursing staffs.

Amazing progress has been made in providing good working quarters for local health department staffs in co-operation with the Medical Care Commission. Seventy-three health centers have been completed; five are under construction; three are planned and approved. Six more have been built entirely with local funds.

## V. ORAL HYGIENE

The decade, 1948 to 1958, has been a most significant one for Public Health Dentistry. It was in the early fifties that, as the result of many years of careful research and experimentation, the fluoridation of public water supplies was accepted and endorsed by leading scientific and professional groups as a safe and effective means of greatly reducing the incidence of dental caries. The State Board of Health approved the fluoridation of municipal water supplies in 1950, later re-affirming and strengthening our policy to one of recommending fluoridation. Charlotte was the first city in North Carolina to fluoridate its water supply in 1949. Now there are twenty-five towns in the State, with a combined population of approximately 600,000 which have adopted this preventive measure. In many of these towns the beneficial results of fluoridation may already be observed in the better teeth of your children. Many other communities have the matter under consideration. Physicians, dentists, and public health workers should be alert to the opportunities for promoting this very promising public health procedure. Sodium fluoride has also been furnished to private dentists for topical application since 1948.

This ten year period, we believe, marks a turning point in reducing the gap between dental health needs and dental services. With a reduction in needs effected by fluoridation and by the results of a program of dental health education and with an increase in staff, our Division of Oral Hygiene is optimistic over the prospects of being able to render more nearly adequate dental services. Special efforts in recruitment during this period have brought results. The staff of public health dentists has been doubled from ten to twenty. Some recent losses to the Armed Forces and to private practice have temporarily reduced this number. However, at the beginning of the next school year, we hope to fill the vacancies, as well as, several new

positions provided for in the budget for fiscal 1959.

A development of importance to dental public health, during the last ten years, is the growing interest among members of the dental profession in children's dentistry. It is gratifying to note more general practitioners devoting time to working for children and more dentists specializing in the field of children's dentistry. The founding of the Dental School at the University of North Carolina has given impetus to this movement, while the dental health education program of the Division of Oral Hygiene has created an increased demand for good dental services for children. This reciprocal relationship between private practice and public health dentistry is good for both. It is essential to the welfare of the people and to the attainment of our goal of better dental health for all of our citizens.

## VI. PERSONAL HEALTH

**Maternal and Child Health.** Following a conference of representatives of the Children's Bureau, the State Board of Health, and the North Carolina Pediatric Society, it was decided that concerted effort should be made to improve the facilities for the care of premature babies and hopefully at the same time through improved prenatal care eventually reduce the number of premature births. Beginning in late 1948, especially equipped and staffed premature centers were established in strategic areas throughout the State. There are now seven centers with bed capacity of approximately one hundred. Arrangements were made at Duke for special training of hospital and public health nurses in the transportation and care of premature babies. The pediatricians are paid for their services up to \$50.00 per infant. The cost of the program has ranged from around \$200,000 to \$275,000 per year. Many extremely small infants have survived. In the early years of the program, several of these infants developed retrosternal fibroplasia. Since discovery of the fact

that too high a concentration of oxygen was largely responsible for such conditions, blindness from this cause has been almost completely eliminated.

A special study in the three medical school hospitals in the field of fetal and neonatal mortality was started in 1954. It involved the completion of a questionnaire on the mother and infant in case the infant is born dead or dies within 28 days. It also includes an approximately equal number of mothers whose infants survive as controls. Several papers on the activities of this study have been published. Tentative arrangements are for this study to continue at least five, and hopefully ten, years.

Beginning in 1953 an annual three-day refresher course in obstetrics and pediatrics has been given by Bowman Gray School of Medicine faculty in these fields for general practitioners and health officers conducting maternal and infant clinics in health departments throughout the state.

Beginning in 1952 special institutes for midwives have been conducted on an annual basis. State Board of Health consultants and selected public health nurse supervisors and public health nurses have conducted these institutes. About the same time, the MCH Section began conducting three-to-five day institutes in the field of prenatal and well child clinics for public health nurses. These have been conducted primarily by State Board of Health consultants in obstetrics and pediatrics.

Plans have been completed for a very modest program for mentally retarded children consisting first of a three-day orientation course at Caswell Training School for state and county public health nurses and social service workers (welfare). Part II is a pediatric clinic in the western and eastern part of the state for diagnosis and evaluation. An important function of these clinics will be finding and correcting surgical, medical, nutritional, and emotional conditions amenable to treatment. The program will be primarily for children under school age. Orien-

ting public health nurses and social service personnel at Caswell should enable them to render more useful counselling and guidance services to the parents of retarded children until they become eligible for admission to special classes for the trainable, educable, day training centers, or institutionalization.

**Crippled Children.** Support funds were first used only for clinic, hospitalization and surgery services for the correction of orthopedic defects.

In 1952 congenital heart lesions amenable to surgery were added at the three medical school hospitals and Charlotte. Beginning in 1953 rheumatic fever clinics were supported at the three medical schools, and at Asheville, Wilmington, Charlotte, and Greenville. This service provides diagnosis, evaluation, treatment and follow-up services up to age 21. In 1956 it took on the support of speech and/or hearing defect clinics at Duke, N. C. Memorial Hospital, Greenville and Asheville.

**Cancer.** Beginning in 1949 the State Board of Health has established detection or detection-diagnostic cancer clinics in approximately 18 locations throughout the state. Three of these have been discontinued. These clinics are open to the public and are for diagnosis and casefinding only. The program also provides a limited amount of funds for treatment of indigent cancer patients by means of surgery, x-ray or radium for curable patients or patients in whom the disease process can be arrested.

**Heart.** Twice a year three-day refresher courses are given in cardiovascular diseases at Bowman Gray for approximately thirty general practitioners. Twice a year at Duke, courses are given in the fundamentals of electrocardiography for approximately forty general practitioners. The spring course is for beginners and the fall or winter course is for more advanced study. Subscriptions to the "Heart Bulletin" are made available for general practitioners, cardiologists and internists.

The State Board of Health pays for

one week Cancer or Cardiovascular Public Health Nursing at the School of Public Health for public health nurses electing these courses.

**Nutrition.** Beginning in 1948, the nutrition program provided consultation services in dietetics to state hospitals and prison camps. More recently the staff of dietitians has been increased and this service has been made available to many convalescent, nursing, foster and boarding homes. Stimulated by the first allocation of state funds in 1949 the number of nutrition consultants has grown from four to nine. Internships in nutrition have been provided and a nutrition education supervisor is responsible for interns, orientation courses on nutrition for students and graduate personnel. Since 1953, the nutrition staff in cooperation with other state agencies interested in nutrition and food handling have conducted an institute primarily for the personnel responsible for food service in hospitals.

In the Personal Health Division the Board has established an advisory committee for the Crippled Children's Section and the Cancer Section policies are determined in consultation with the Medical Society's Committee. An obstetric consultant was employed in October 1954.

## VII. SANITARY ENGINEERING

The program of work and responsibilities in sanitary engineering and sanitation have changed to keep pace with the "changing times" and new modes of living. New problems have uncovered new methods and new approaches toward solving these problems.

Our greatest accomplishment has been in better public relations with the many groups and individuals served. Closer cooperation with other agencies has helped obtain desired and more adequate sanitation facilities in our homes, prison camps, educational and medical institutions, our milk, food and shellfish industry, restaurants, recreational facilities, municipal water supplies, environment of migrant labor-

ers, municipal garbage and refuse disposal and in the field of insect and rodent control.

Our sanitation programs, which were primarily concerned with rural areas ten years ago, are now focusing more attention on urban and congested semi-urban areas or so-called "fringe areas". For example, in 1947 we approved 3,000 privies and 7,500 septic tanks; and in 1957 we approved 5,234 privies and 21,499 septic tanks. Also during 1957 there were 8,940 new sewer connections reported. These figures show the progress made in residential sewage disposal. Many counties have improved their ordinances and are devoting more attention to fringe area problems of water supply and sewage disposal.

The most drastic sanitation improvements have taken place in our hospitals, school lunchrooms, hotels and motels. Better equipment is being used and high standards of sanitation are being followed. The number of Grade A restaurants has increased more than 50% during the last 5 years (3076-4617). Great progress in milk sanitation has occurred and 47 counties now require that all milk be pasteurized. Approximately 95% of all milk sold in the state is pasteurized.

Considerable improvement in education of sanitation workers has taken place. Classes for food handlers have been inaugurated and this work is being expanded into other fields. Our shellfish sanitation program has expanded and improved and a full-time bacteriologist is now employed to provide closer check on the quality of shellfish being produced and distributed in North Carolina. The trends in the food and milk sanitation fields are toward "automation" and this will require more knowledge and training and changes in procedure. Reciprocal milk ratings among the various local health departments have been stimulated.

In the field of water supply, we have promoted fluoridation and the better training of water works operators. Provision of community water supplies has increased and the number under

supervision has increased from 310 to 557 during the past ten years. These supplies serve approximately two million people.

Great progress has been made in insect and rodent control. The problems of malaria and typhus fever and the type of programs have changed with the elimination of malaria from our state. Control in these fields is now directed at all insects and rodents that adversely affect our health or comfort. Salt marsh mosquito control was added by the 1957 General Assembly as a progressive approach to the insect control program.

In the field of radiological health, we have begun a program of monitoring our water supplies and inspecting the uses and disposal of radio-isotopes. Radiation fall out and air pollution monitoring stations are being operated in cooperation with the U.S. Public Health Service. More attention will be given to these two programs in the future as our over-all approach to the problem of environmental sanitation changes.

In cooperation with other state and local agencies—education, welfare, agriculture and employment security—the health protection of migratory agricultural workers has been greatly improved. Sanitary landfills have greatly improved waste disposal and helped to reduce rodent and insect problems.

### **VIII. WATER POLLUTION CONTROL**

The North Carolina State Board of Health has devoted attention to the problem of municipal sewage disposal since passage in 1893 of the first State Laws relating to the protection of public water supplies. These Laws, subsequently amended in 1899, 1903, 1907 and 1911, were primarily concerned with protecting streams used as sources of public water supplies; therefore, little or no protection was afforded other streams, particularly with respect to pollution by industrial waste discharges.

It became apparent that there was also need to control pollution from the standpoint of all water uses. Conse-

quently, in 1951, after much effort on the part of all concerned, the General Assembly enacted the present State Stream Sanitation Law (Chapter 606, Session Laws of 1951). This Act created within the State Board of Health a permanent Committee known as the State Stream Sanitation Committee, set forth its duties, and authorized the development and administration of a comprehensive stream pollution control program based upon the classification of all waters according to the present or potential future "best usage". This statute remained substantially unchanged until 1957, at which time amendments were enacted making the State Board of Health the administrative agent of the Committee so that this program might be more closely coordinated with and integrated into the total public health program of the State.

Since the establishment of the Committee a determined effort has been made to carry out an effective stream sanitation program. The work involves detail studies of pollution and water uses in each major river basin, holding public hearings, classification of waters according to existing or contemplated "best usage", and administering a comprehensive pollution abatement program throughout the State.

The program was initiated during 1951, with 13 employees and an annual budget of \$76,267, and has been rapidly expanded so that the Division of Water Pollution Control now employs 33 permanent and 7 part-time employees and operates with an annual budget of \$257,074, including \$98,642 of Federal grant funds.

Much progress has been made in carrying out the program. During the past six and one-half years, studies have been completed in 9 major river basins comprising 75% of the total area of the State, 9 public hearings have been held, and classifications have been assigned to the water in 5 basins representing 40% of the State. Concerted efforts have also been directed toward control and abatement

of stream pollution. These efforts have resulted in the issuance of 94 Certificates of Approval and Permits covering sewage and waste treatment projects costing an estimated \$33,000,000. Construction has been completed in connection with 55 projects costing \$21,000,000, while 21 other projects costing \$15,500,000 are now under construction. Active planning is under way in connection with 74 additional projects. Applications for Federal grants under Public Law 660, 84th Congress, have been filed by 33 municipalities, of which 25 were approved for grants totaling \$2,526,540 covering projects costing \$11,658,434. These grants have stimulated sewage treatment works construction. The available grant funds, however, are inadequate to meet current demands. Many eligible projects could not be approved, and several projects are on the waiting list.

In addition to the above, special studies have been conducted on waste discharge at 64 municipalities and industries. Likewise, assistance has been provided officials of other state agencies, municipalities, industries and their engineers in evaluating waste disposal problems at plant sites being considered by prospective industry.

According to present plans and contingent upon the Division continuing to receive operating funds equal to those now available, all streams in the State will be studied and classified by the end of 1962. In the meantime, every effort possible will be exerted toward abating existing pollution and in preventing new pollution.

#### COMMENT

You are invited to recall the opening questions on these public health adjustments of the decade. Have these

changes been in tune with the new needs brought on by the shift in problems from the decrease in communicable diseases, our aging population and our main disease and economic burden shifting to the degenerative diseases, accidents and mental disorders? We shall continue to have problems in preventive and treatment medicine. Unless we physicians in both areas work together toward their adequate solution non-medical groups may be expected to take over leadership toward their solution. Your State Board of Health and local boards have better representation by physicians than any other official agency and through them we physicians have our best opportunity to exert appropriate leadership toward better health and freedom.

In closing a quotation by the President-Elect of the A.M.A. seems fitting in our review of the decade and planning for the next:

"In those areas where public health officials and private practitioners have cooperated, the results have been wonderful. Certainly, the benefits of further cooperation are unlimited. To bring about more of this kind of accomplishment, we must eliminate unproductive rivalries and interminable wrangling which do immeasurable harm to our cause and bring public discredit upon both of us. It takes two to feud; two to quarrel. But these same two can unite their efforts; they can pull together; they can work wonders for the people they serve. As Thomas Carlyle wrote: 'Men's hearts ought not to be set against one another, but set with one another, and all against evil only.'"

Respectfully submitted  
J. W. R. Norton, M. D.,  
State Health Director

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MR. EARL C. HUBBARD, Director, Division Water Pollution Control, Receiving Fuller Award from Mr. Fred Merryfield, President, American Water Works Association.

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List of free health literature will be supplied by local Health Departments or on written request.

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## REFUSE DISPOSAL BY SANITARY LANDFILLS

By Charles M. White, Chief  
Insect and Rodent Control Section, Sanitary Engineering Division  
N. C. State Board of Health, Raleigh, N. C.

Americans are the most prosperous people on earth, and the most wasteful. Left-over foods, partly worn out gadgets, empty bottles, boxes, crates and tin cans that would be regarded as valued possessions in many parts of the world are thrown away by us with casual indifference. It is estimated that the average American produces from one to two pounds of refuse daily, and in many urban areas the total weight of discarded materials is approximately twice as much, on a per capita basis, because of rubbish and garbage from commercial and industrial establishments.

Unfortunately, our waste materials

cannot be indifferently cast aside with impunity. Dead bodies must be buried or cremated. Intestinal discharges are either isolated or given approved treatment. And steps are now being taken to require the effluent from industrial plants to be rendered harmless before it is dumped into our streams. It is also important, in the interests of public health, economy, general comfort and aesthetics to dispose of garbage and rubbish in a safe and sanitary manner.

### The Public Health Importance of Refuse

Refuse is a term used for garbage, dead animals, trash and other discarded

ed items. When not properly disposed of, it provides breeding places for flies, mosquitoes, cockroaches and rats. Many stray dogs get most of their food from garbage.

It has been proved that flies transmit dysentery and enteritis. It is possible that they may be involved in the transmission of other diseases, such as typhoid fever, cholera and poliomyelitis.

Mosquitoes that breed in the water-holding receptacles, such as rubber tires and tin cans, at dumps are vectors of dengue, filariasis, yellow fever and encephalitis.

Cockroaches by their filthy habits spread the organisms of infectious diseases.

Rats or their parasites, such as fleas and mites, transmit plague, endemic typhus fever, leptospirosis, salmonellosis and rat-bite fever.

Hogs that feed on raw garbage usually become infected with *Trichinella spiralis*, the organism that causes trichinosis. We get the disease by eating improperly cooked pork from these hogs.

Stray dogs are the principal reservoirs of rabies.

It is possible that the pathogenic organisms which cause other human diseases may live in garbage and be carried to us by birds, rodents, air currents or other means.

#### Economic Loss From Refuse Dumps

The value of real estate in the proximity of an open refuse dump is greatly depreciated. Such a dump is a perpetual fire hazard, as one is seldom seen that is not burning at some place. Sparks from these fires often cause damage to adjacent property. Rats that breed in open dumps migrate to other places, where they consume and pollute foods that are growing, or in storage, and otherwise damage valuable property. Insects that breed there and birds having access to open dumps spread diseases among domestic animals and poultry.

#### General Discomfort and Aesthetics

The foul odors and smoke arising

from open dumps pollute the atmosphere and make contented living in the adjacent area impossible.

Aside from their role in the transmission of disease organisms, insects that breed in refuse dumps cause much discomfort. Mosquitoes by their biting habits are a continuous source of annoyance. Flies and roaches invade the surrounding premises and travel into town on the vehicles that haul the refuse. Their filthy habits combined with their abundance cause these insects to be regarded by many housekeepers as the most obnoxious of all pests.

It is difficult to conceive of anything that detracts from the beauty of a landscape more than an open refuse dump. A conglomerate disarray of dead animals, rotting vegetation, rusty tin cans, broken toys, worn-out automobile tires, cast off bed springs and other unsightly and foul-smelling discards of modern civilization produce a scene that is repugnant to the most callous observer. No community with a vestige of civic pride should tolerate anything so offensive to our sensibility.

#### Sanitary Landfills

Many North Carolina communities are now eliminating these dumps by burying their refuse in sanitary landfills. This method of disposal, if properly done, does not produce a community nuisance greater than that caused by other types of new construction.

A sanitary landfill is a place where garbage and other refuse are compacted and covered with earth. Proper compaction reduces the volume of most refuse by approximately seventy-five per cent. This is usually accomplished by running back and forth over the refuse with heavy crawler-type equipment.

There are two stages in the application of earth coverage. At the end of each day's operation, the compacted refuse is covered with a seal layer of earth one foot thick, thus forming a cell, and a final covering of at least two feet of earth is compacted on top

of each part of the fill when it is completed.

Two sanitary landfill methods are in general use. These are the trench and area methods. In many instances, combinations of the two are employed. In the first method, the refuse is placed in a trench, compacted and covered in longitudinal cells. Cover material is obtained by the excavation of a parallel trench. In the area method, the refuse is placed above the natural ground level, compacted, and covered in cells. The material used for covering is obtained below the natural ground level or at an elevation above the top of the fill or is hauled in from another location.

#### A. Advantages of Sanitary Landfills

1. No breeding places for insects or rodents are created.
2. Food for stray dogs is not provided.
3. Fire hazards are eliminated.
4. Smoke and odors do not result from the operation.
5. It is not necessary to separate the types of material. This permits the combined collection of all refuse.
6. The beauty of the landscape is not adversely affected.
7. Adjacent property values are not diminished. In some cases they are enhanced.
8. Reclamation of useless land is frequently possible to provide sites for playgrounds, parking lots, and other purposes.
9. The cost in most instances is less than that for any other satisfactory methods of refuse disposal.
10. Lack of uniformity in the quantity of refuse disposed of daily does not interfere with efficient operation.
11. It can be put into operation quickly.
12. Shorter hauls are usually possible.

These advantages are not realized if the landfill is not properly operated.

#### B. Costs of Sanitary Landfills

Sanitary landfills are the cheapest satisfactory method of refuse disposal for most municipalities. Both initial investment and operating expenses are, for smaller cities and towns, less than when disposal is done by incineration. Estimates provided by the Public Health Service indicate that it costs less than fifty cents a ton to dispose of refuse by sanitary landfills and over a dollar a ton by incineration. These amounts, of course, vary considerably in different localities.

#### C. Land Requirements

Land requirements are influenced by the quantity and type of refuse, amount of compaction received, depth and spacing of cells and trenches, degree of planning and efficiency of operations. Available information indicates that the average daily per capita refuse, both domestic and commercial, is approximately three pounds. This amount, of course, would not be constant for all communities. Some types of refuse, such as pasteboard cartons and wooden crates, can be greatly reduced in volume, while the reduction in items such as rubber tires, tree trunks and bed springs is almost negligible. Experience shows that, on the average, with proper compaction, an approximate reduction of 75% in volume is attained.

It has been found in actual practice that from three-fourths to one and one-half acre of land per year is required for 10,000 people.

#### D. Sanitary Landfills in North Carolina

The number of North Carolina municipalities that use this method of refuse disposal increases each year. A recent survey by the Sanitary Engineering Division of the North Carolina State Board of Health showed that there are now sixty-three sanitary landfills being operated by our towns and counties, in addition to those privately financed by contract garbage collectors or progressive rural communities. Many small towns that are located near landfills operated by larger places are disposing

of their refuse in them. For this privilege they usually pay a small fee.

There are now only six North Carolina cities with populations in excess of 10,000 that do not have landfills, and the city manager of one of these has expressed the intention to begin operating one within a few months.

Unfortunately, our survey revealed that a large number of the landfills in the State are not being operated in the approved manner. Some are no better than open dumps. Indifference on the part of public officials, lack of supervision and poor planning, in too many cases, have resulted in sloppy, insanitary operations, even though they have expensive equipment that is capable of doing the job in a neat and sanitary manner.

If your town still disposes of refuse in an open dump, you should try to get the officials to use the sanitary landfill method. Talk it over with them and the personnel in your local health department.

If you do have a landfill, drive by and look at it occasionally. If it is operated correctly, the officials should be proud to show it off. If the job is

not being done in the approved manner, notify the appropriate officials. Let them know that you expect public funds to be spent in an efficient manner and not wasted. A good operation costs no more than a sloppy one after the equipment has been bought and the operating personnel put on the payroll.

Regardless of the method of refuse disposal your community has, use it and it only for that purpose. Don't throw refuse out on the roadside, in vacant lots or other unauthorized places. People who do so are creating open dumps on a small scale that not only mar the beauty of our landscapes but also contribute to a lack of clean, healthy living.

The North Carolina State Board of Health has engineers on its staff who are experienced in the planning and operation of sanitary landfills. If your community needs their help in planning a new landfill, or in improving operation methods on one that is already in existence, get in touch with your local health department and they will have someone visit your community for that purpose.

## NOTES AND COMMENT

### FULLER AWARD

NORTH CAROLINA SECTION

### EARL COLVIN HUBBARD

Director

Division of

Water Pollution Control

State Board of Health

Raleigh, N. C.

For his energetic devotion to the advancement of the section, particularly as Secretary-Treasurer; his untiring efforts with and for the operators group; and his years of faithful public health engineering activities in improvement of public water supplies.

The Fuller Award is conferred annually by the American Water Works Assn. upon an outstanding member of each of the 30 sections comprising the

nation-wide organization for distinguished service in the water supply field.

### POISON IN YOUR HOME

Mrs. Housewife—there's a killer in your home!

But you don't need weapons to defend yourself, the National Safety Council says. Just common sense and a lot of caution.

The killer? Poisons. They lurk everywhere—in the medicine cabinet, under the kitchen sink, on dressing tables. You'll even find them on food shelves, in the workshop, and in your cleaning closet.

These camouflaged killers in the home, the Council points out, take more than 1,000 lives annually. They

take a steady toll throughout the year—about 120 lives a month.

Most frequent victims are children 5 years of age or younger. But right up there as home poison victims are persons in the 25-44 and 45-64 age groups.

The types of accidental poisoners are as varied as the containers they come in—bleach, permanent wave solution, shampoo, nail polish remover, furniture polish, art supplies, bug killers, paint removers.

Regardless of the killer, in just about every instance there's an accomplice to the crime—carelessness or ignorance.

For example, some potential poisoners are properly labeled—but a lot aren't. Doctors aren't always sure if a product is poisonous. And some ingredients, harmless to most persons, can kill others—especially children.

In many instances, the killer is an otherwise harmless object—aspirin, for example. About 1 out of 5 children treated for accidental poisoning in a recent year had swallowed aspirin, the Council reports. Kerosene is a troublesome household commonplace, especially in rural areas and in the South.

Old houses, too, can be boobytraps for children. Tots can be poisoned by peeling paint on window sills and frames, or by crumbling plaster. Each can cause lead poisoning.

The way to prevent poisoning?

1. "Education," the Council says. "Parents should be made aware of the dangers lurking in their homes."

2. Stricter state and federal laws. "Ingredients should be listed on bottles or cans containing poisonous substances—even products valuable to our everyday living."

Best way, though, is to prevent the poisoning, the Council says. How?

By following these rules: (1) Store medicines out of the reach of children, (2) Don't put poisons near foods—it's too easy to confuse the two, (3) Don't take medicine in the dark, (4) Keep poisonous substances out of soft-drink

bottles, used jelly jars, or pans, for example and (5) Have a locked poison compartment in your home.

## MEAT IS GOOD SOURCE OF IRON FOR PREMATURE INFANTS

Anemia and iron deficiencies in premature infants can be partially overcome with the early addition of meat to their diet.

This dietary supplement, given within two to four weeks after birth, has particular value in increasing red cell volume and circulating hemoglobin mass and building iron reserves.

These conclusions are advanced after a study of 35 premature infants and are published in the *Journal of Diseases of Children*, a publication of the American Medical Association.

The authors, Dr. Thomas R. C. Sisson and Lorraine E. Whalen, Rochester, N. Y., said "there is an almost inevitable development of anemia and iron deficiency in premature infants during the first year of life."

Since meat protein is well absorbed and utilized by infants, the present study was undertaken to determine if the early addition of meat to the diet would be an effective source of iron, the authors said. During the year-long test, customary diets for premature infants were given to all 35 babies. Fifteen were also given meat supplement beginning between the second and fourth weeks of life.

A marked contrast in the two groups was apparent within a few weeks, the authors said. Those receiving meat showed an increase of red cell volume and hemoglobin mass between the sixth and eighth week. This gain was not noted in the control group until about the twelfth week.

After this initial gain, the authors said that in the control group there began a decline in blood values which in some instances reached such a low level it was necessary to give medicinal iron treatment.

"The steady decline of these values . . . demonstrates the need for some

effective iron source in the diet," they said.

Following their early gain, the blood values of the meat-fed infants remained at a constant level until the thirtieth week when they again showed an increase. This increase continued during the remainder of the study and a definite "increase in iron stores" was noted by the time of their first birthdays.

The authors said, "Strained meats were tolerated by all infants, and frequent gastric distress associated with the administration of medicinal iron was avoided."

Meat, they concluded, "provides an excellent source of protein for the infant diet and, this study indicates, an acceptable and utilizable source of iron in natural form."

#### BIRTHRATE SLOW-DOWN CAUSED BY RECESSION

It appears that the current business recession is teaming up with the depression of the 1930s to force a slowdown in our booming birth rate.

The two slumps are partly to blame for the present decline in the number of marriages and births, according to an editorial in the *Journal of the American Medical Association*.

The editorial said, "These two declines suggest but do not prove that the end of the baby boom is in sight."

"Because of the comparatively small number of births during the 1930s, the number of youths attaining marriageable age continues to be fewer than can be expected during the 1960s," it explained.

While the number of births still exceeds 300,000 a month, the first quarter of 1958 saw a reduction of 7,000 births over a similar period a year ago.

This decline, according to the editorial, "is due in some measure to the business recession."

This may only be an interval in an irregular rise in births and marriages, it said, but it "should make one hesitate about predicting a population explosion in the United States."

#### POLIO VACCINE DOES NOT CAUSE BRAIN DAMAGE

Suspicions that Salk vaccinations might cause damage to the brain or central nervous system are unfounded, two Chicago researchers said recently.

This observation was made following an extended clinical study of 852 persons in all age groups who received three inoculations with the vaccine.

The study was prompted by reports which were circulated during the 1956 mass inoculation program to the effect the children were developing convulsions and other signs of central nervous system disorders after being vaccinated.

Mrs. Erna L. Gibbs and Dr. Frederic A. Gibbs termed the outcome of the study "astonishing." "We had not expected to obtain such completely negative results with a biologically potent material."

Writing in the *Journal of the American Medical Association*, they said it was their intention to determine if a mass immunization program against poliomyelitis could cause brain disorders in some persons.

Sudden, unexplained illnesses, some of which defy the most expert diagnosticians, are common in many children.

"By coincidence," they said, "an unexplained illness could follow a Salk vaccination at just the right time to convince the family and even the physician in charge that the vaccination was responsible for the child's illness or even his death."

If the brain suffered abnormalities as a result of a Salk inoculation, it would be indicated by the presence of encephalitis, an inflammation of the brain.

This condition occurs on extremely rare occasions following vaccination against disorders such as whooping cough, rabies, diphtheria, and tetanus.

Encephalitis is detected by means of an electroencephalograph, which measures electrical activity within the brain. A slowing of the waves would indicate

a reaction and probable presence of the condition.

In the study, electroencephalographic tests were given to each of the 852 patients before and after the three Salk inoculations.

Since no abnormalities were uncovered, the researchers concluded that "Salk vaccine is unlikely to cause an encephalitic type of reaction or brain injury."

The test, according to the authors, also showed that epileptics and persons with prior brain damage can be safely given the vaccine. One hundred and six such persons were inoculated without incident.

The study was carried out in three centers—Chicago, Rockford, Ill., and Richmond, Va.—in order that local conditions might not affect the results.

#### **POWER MOWER SAFETY RULES LISTED IN TODAY'S HEALTH**

Power mowers are labor-saving tools, but they can be "deadly machines," as shown by a rising accident rate involving operators and bystanders.

Some rules for safe use of power mowers were outlined in *Today's Health*, published by the American Medical Association.

Dennis Orphan, associate editor of the magazine, said a two-year Georgia study showed 737 power lawn mower accidents resulting in 794 injuries. Of the injuries, 69.6 per cent were caused by direct contact with the mower, and 30.4 per cent by objects thrown by the mower.

"Most power mower accidents are due to carelessness," Orphan said. "The most common accident happens when operators attempt to start machines. They ignore safe procedures by starting the machine with one or both feet under the back or side of the machine.

"The second most common accident occurs when the operator mows on a hill or incline. He loses his footing and the machine rolls back over his feet."

He also pointed out that a four-cycle engine, turning a 20-inch blade at 3000 revolutions a minute can pick up

a nail or stone and hurl it 170 miles per hour.

Thus power mower owners should develop "a healthy respect" for their machines and learn how to use them correctly.

Some rules, listed by Orphan, for safe operation of mowers are:

—Clear the yard of all rocks, stones, nails, bones, wires, sticks, and other debris before you start.

—When you start the mower, keep your feet in a safe position away from the blades.

—Know how to disengage the clutch or how to stop the engine quickly in case of emergency.

—Store gasoline in an approved, tightly-sealed container in a safe place, and refuel the engine only when it is cool.

—Never work on the machine when the motor is running.

—Tip the mower by applying pressure on the handles. Never reach underneath and risk losing a finger.

—When mowing on rough terrain, set the blades high to prevent debris from being ejected from the mower.

—Keep your hands, feet, and loose clothing away from any moving part of the machine.

—Make sure the electric mower has a ground wire, and don't use it when it's wet or when it's raining, unless the machine and cord are in perfect condition.

—Don't leave the mower unattended when the motor is running and keep bystanders and pets away from the mowing area.

—Don't let the mower pull you. To maintain control, slow it down. Never run or trot.

—Don't cut up and down on hills. If you slip, the machine may slide over your toes. Cut sideways.

—Never remove anything from the mower until you are certain the blades have stopped.

—Don't increase the speed by tampering with the governor. Excessive cutting blade speed is dangerous.

## HARVARD LETTERMEN STUDIED FOR HEART DISEASE

The value of exercise in preventing heart disease has again been shown in a new study of former Harvard College football players.

The study, made by Dr. William C. Pomeroy, Los Angles, and Dr. Paul Dudley White, Boston, was reported in the *Journal of the American Medical Association*.

An attempt was made to follow up 424 Harvard students who won their football letters in the years 1901-1930. Of these, in 1955, 126 were known to have died and 292 to be alive, while six could not be traced.

The cause of death was known for 87 of the 126. Among these, coronary heart disease was responsible for 25 deaths, or 29 per cent. Cerebral hemorrhage, generalized arteriosclerosis, and congestive heart failure accounted for eight more deaths, making the total 33 cardiovascular deaths, or 38 per cent, the doctors said.

Cancer apparently caused 11 deaths; pneumonia and war injuries, 9 each; accidents, 8; suicide, 4, and miscellaneous, the rest.

These football players who showed coronary heart disease were compared to others without the disease for body build, weight gain, personal family status, family history, habits of exercise, use of alcohol and tobacco, and diet.

"One of the most significant findings in the study was the apparent protection afforded by the continuation of a program of heavy exercise," the doctors said.

"Those who maintained even moderate habits of exercise were less prone to coronary heart disease, and no individual in this study who maintained a heavy exercise program happened to develop coronary heart disease," they said.

The study also showed the following:

—Body build did not differ significantly between the two groups, but there was more weight gain in the coronary group than in the others.

—There were more divorces in the coronary group. This "may or may not" represent a factor of stress.

—There was a higher percentage of family history of coronary heart disease in the coronary group in the control group.

—Smoking and drinking appeared to play no part in the development of heart disease, and the lack of details about dietary habits precluded any conclusions in this area.

## DOCTOR OUTLINES REASONS FOR ANEMIA IN INFANTS

The number of infants and small children who develop iron deficiency anemia continues to be a "shocking public health problem," a Tennessee physician said recently.

However, the blood disorder can be prevented if the susceptible infants are recognized and given extra iron, Dr. Calvin W. Woodruff, Nashville, said in the *Journal of the American Medical Association*. Iron is necessary for the production of red blood cells.

During a three-year period, he studied 272 anemic children under the age of five years at a clinic associated with Vanderbilt University School of Medicine.

The most significant factors in predisposing a child to anemia were low birth weight, high birth order, twinning, and masculinity. A diet poor in iron did not appear to cause anemia, since these children ate the same diet as did other children who did not become anemic, Dr. Woodruff said.

Prematurity or low birth weight was the most common factor, he said, adding that premature infants tend to grow faster during the first year of life than do full-term infants, thus requiring larger amounts of iron. Boys also grow more rapidly during the first year of life than do girls.

Twenty-six of the infants were twins. Both members of nine pairs were anemic; only one member was anemic in eight instances. Twenty of the twins were premature on the basis of birth weight.

The study also showed that the incidence of anemia in white infants increased as birth order increased, reaching a peak with the fourth-born infant. In Negro infants, the peak was for second-born infants.

There is also a factor of deficient iron stores at birth, resulting from blood loss during delivery or because the mother is anemic, Dr. Woodruff said.

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### **SURGERY FOR ONE HEART DEFECT NEEDED IN VERY EARLY LIFE**

Surgical correction of patent ductus arteriosus, a congenital heart defect, should be done before a child reaches the age of five, even if he shows no symptoms, two Ohio surgeons said.

Writing in the *Journal of the American Medical Association*, Drs. H. William Clatworthy Jr. and Victor G. McDonald Jr., Columbus, said the "optimum age" for performing the operation has not been clearly defined, although it usually has been considered to be between six and 12, unless signs of heart failure appear.

However, failure to correct the defect in early life may expose the child to the "needless threat" of retarded growth, heart and lung malfunction, and other serious complications, the doctor said.

The ductus arteriosus is a duct between the aorta and the pulmonary artery in the fetus. When this normal fetal duct fails to close at birth, it usually produces an enlargement of the heart.

Of 63 patients under the age of 16 years who were operated on at Columbus Children's Hospital during a seven-year period, nearly 50 per cent were younger than five years. Among the 63 patients there were no deaths or any serious postoperative complications.

In general the postoperative course was smoother in the younger children, even though the majority of them showed serious symptoms, were badly underweight, and often suffered from

the heart's inability to maintain adequate circulation.

On the basis of the study, the doctors concluded that the operation should be performed on any child who shows symptoms as soon as the diagnosis is established and on children without symptoms before they reach the age of five years.

Failure to eradicate the defect may expose the infant with symptoms to progressive failure of the heart to maintain adequate circulation and the young child to the needless threat of cardiorespiratory disability, growth failure which may not be entirely reversible, and to such additional serious complications as endarteritis, degenerative disease of the major and minor pulmonary vessels, and irreversible pulmonary hypertension.

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### **PERSONS SHOULD KNOW OWN "EMOTIONAL BOUNDARIES"**

A person who knows his own "emotional boundaries" functions usefully, happily, and gracefully, a Cincinnati physician said.

In dealing with other persons' emotional problems an individual must know "where he leaves off and where someone else begins," Dr. Charles D. Aring said in the *Journal of the American Medical Association*.

While he was aiming his remarks at doctors and others in the "interviewing professions," his advice is applicable to people who just listen to friends and relatives.

Dr. Aring noted that one of the most difficult tasks upon man is that of learning how to listen to another's problems without involving himself emotionally.

People are early conditioned to react in certain ways to other people's emotions. But reacting without conscious consideration for the person's current situation will not help him solve the problem, and may even complicate it because still another person's emotions become involved.

The goal is to learn how to listen and help, but on the basis of a con-

scious awareness of the situation and not on a reflexive reaction. It might be said that the goal is empathy instead of sympathy.

The statement that "one cannot fully appreciate the problems of others unless he can put himself in another's place" is true, but one has to remember his own emotional boundaries. He should be empathetic rather than sympathetic.

When one is sympathetic, he does not remember his own boundaries, for sympathy means the act or capacity of entering into or sharing the feelings of another and becoming similarly affected.

"Becoming similarly affected" may be the act that completely complicates the situation. It does not allow for intellectual analysis and advice.

But when one is empathetic, there is the possibility of helping to solve the problem. Empathy means putting oneself in another's place and understanding the situation but always maintaining an awareness of one's separateness.

One has one's own feelings and relationships and works to understand them. They can be useful in understanding similar feelings and relationships in others, Dr. Aring said.

Thus in dealing with other persons, an individual must understand and appreciate their problems. But he must also understand that this is quite different from joining in the problems, and, in so doing, perhaps adding further complications to the situation.

Dr. Aring is in the department of neurology at the University of Cincinnati College of Medicine and the Cincinnati General Hospital.

#### **LICENSE OVER 7,000 NEW PHYSICIANS IN U. S.**

For the fifth consecutive year more than 7,000 new physicians entered the practice of medicine in the United States during 1957.

This was revealed in the 56th annual report of the American Medical Association's Council on Medical Education and Hospitals which appears in the

Journal of the American Medical Association.

Of the 7,455 new doctors licensed to practice, 5,872 licenses were given as a result of written examination and 1,583 by interstate reciprocity or endorsement of credentials.

During the same period, 3,500 physician deaths were reported which reduces the over-all gain in the doctor population to 3,955.

In all, state and territorial boards issued 15,090 licenses during the year but 7,635 went to doctors already holding licenses from another state or to men who took examinations in more than one state.

The total number of licenses issued, both by written examination and reciprocity or endorsement of credentials, represents an increase of 547 over 1956.

In issuing 2,167 licenses, California led all other states. New York was second with 1,355, while Ohio and Pennsylvania were next with 831 and 744 licenses respectively. Florida, Illinois, Maryland, and Texas each had in excess of 500. Nevada, with 15, licensed the fewest number of doctors.

During the year there were 9,116 applicants for licensure by written examination. Of these, 7,769 passed and 1,347 failed.

Included among those who took the examination were: 6,244 graduates of approved medical schools in the U. S.; 185 from approved schools in Canada; 4 graduates of approved schools in the U. S. which are no longer in operation; 2,299 from foreign medical faculties; 42 graduates of unapproved medical schools in the U. S. no longer in existence, and 342 graduates of schools of osteopathy.

Three medical schools had graduates for the first time during the period. They were the University of Missouri, University of Saskatchewan, and the University of Mississippi. All of the graduates of the Mississippi school passed their written examinations.

Six other schools also had no failures among their graduates. They are Stanford University, University of Cali-

fornia at Los Angeles and San Francisco, Yale University, Albany Medical College, and the University of Utah.

The graduates of foreign faculties of medicine include both American and foreign born and the 1,345 who passed the examination represent an increase of 333 successful candidates over 1956.

The number of licenses issued on the basis of geographical areas were: New England, 459; Middle Atlantic, 1,718; East North Central, 1,466; West North Central, 708; South Atlantic 1,262; East South Central, 480; West South Central, 751; Mountain, 147; Pacific, 380, and territories and possessions, 104.

### **COMMUNITY IS RESPONSIBLE FOR CARE OF AGED**

The principal responsibility for the care of the aged rests on the family and community level, two St. Louis doctors said.

In fact, the aim in caring for the aged should be to keep them in the community and out of institutions for as long as possible.

In order to do this, each aged person must be treated individually. His major needs are reasons for living, good nutrition, adequate housing, recreation, and good medical care.

Some methods for meeting the individual's needs, especially the medical needs, are outlined by the doctors in the *Journal of the American Medical Association*. Drs. Joseph J. Costello Jr. and George M. Tanaka base their recommendations on their experiences at St. Louis Chronic Hospital.

They said each community needs organized services that will help the aged person care for himself or be cared for by his family at home. These include help in nursing, diet planning, occupational and physical therapy and housekeeping.

A community information center is needed to tell the aged individual about community resources, they said. A counseling service in the center is extremely helpful in directing the person to required medical or other aid.

All agencies that work with aged individuals must carry on a constant screening process, the doctors said. In this way only those individuals who cannot possibly be cared for outside of institutions are referred to them.

Adult recreation centers offer the first screening contact where an aging person's physical disabilities and de-socialization tendencies can be detected. Recreation workers can then refer the aged person to his physician for help.

Hospital day programs, in which individuals are brought to the hospital for day treatment but return to their homes at night, help them maintain some degree of independence and contact with the community, the doctors said.

When individuals are no longer able to live alone but do not need constant supervision, they might move to supervised boarding homes. These again help the aged persons in the community.

Rehabilitation—the constant working with the aged patient to help him care for himself—is important even after the patient is in a hospital or a nursing home, the doctors said. That rehabilitation can be successful is shown by St. Louis Chronic Hospital's experience in returning some completely dependent patients to the community.

Dr. Costello is medical director of St. Louis Chronic Hospital and Dr. Tanaka is chief of the hospital's medical department. They are also instructors in the department of internal medicine at St. Louis University of Medicine.

### **CORRECTION**

Our attention has been called to an error on page 5 of the June Health Bulletin in the paragraph beginning the outline of the work of the Epidemiology Division, third line, the second word should have been "venereal" instead of "general."

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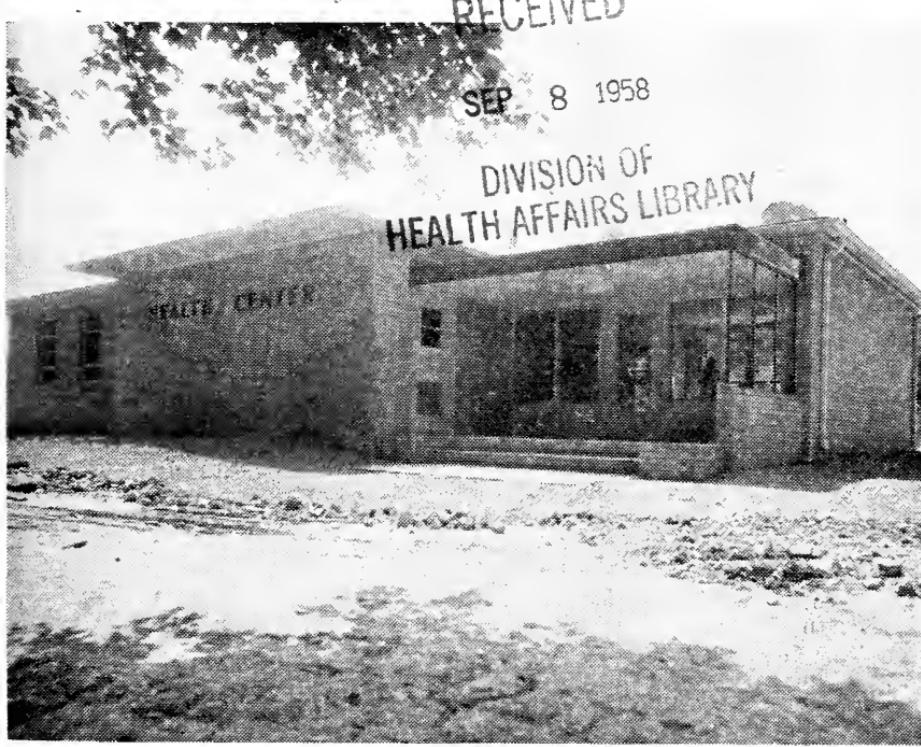
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List of free health literature will be supplied by local Health Departments or on written request.

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## IN MEMORIAM

### Dr. George Grady Dixon

On May, 7, 1958, while returning to his home in Ayden from Asheville, where earlier in the day he had presided over the Conjoint Session of the State Board of Health and the Medical Society of the State of North Carolina and over a regular meeting of the North Carolina State Board of Health, Dr. George Grady Dixon died in Hickory, North Carolina.

George Grady Dixon was born near the Gardner's Cross Roads section of Pitt County on April 29, 1890. His parents were John Mc Dixon and Irene Buck Dixon. His education began in the graded schools in the community of his birth. He attended Winterville High School, from which he graduated in 1908. From 1911 to 1915 he attended the medical College of Virginia, in Richmond, graduating in 1915. He

served his internship at the Grace Hospital, Detroit, Michigan. Following this he started the practice of medicine with the late Dr. W. Harvey Dixon in Ayden, North Carolina. The people of this community began to call him Dr. Grady to distinguish him from the other Dr. Dixon. During World War I Dr. Grady Dixon enlisted in the Army in 1917 as a lieutenant and was honorably discharged in 1919 as a captain. His association with Dr. Harvey Dixon was severed in 1925, when Dr. Harvey Dixon became head of the Caswell Training School at Kinston. Even after Dr. Harvey was no longer in the office the patients, as well as most of the people in that part of Pitt County, spoke of Dr. Grady not for distinguishing purposes but as a term of affection.

Dr. Dixon was married to Miss Julia Elliott of Hertford. They have two sons,

Grady Jr., who is a student at North Carolina State College and John Elliott, who graduated in medicine at Duke University early in June.

Since 1931 Dr. Dixon served as a member of the State Board of Health. He was selected by the Executive Committee of the North Carolina Medical Society to succeed Dr. James M. Parrott, who resigned to become State Health Officer in July of that year. In May, 1932, he was re-elected to that position and has been re-elected since then. In 1949 he was elected President of the State Board of Health, an office which he held at the time of his death.

Many times the medical profession has called upon Dr. Dixon for service and has honored him on numerous occasions. One of the honors most prized by him came in March, 1956, when he received from the School of Medicine at the University of North Carolina the Distinguished Service Award for "significant achievement and meritorious service in medicine."

In addition to his interest in the broad field of medicine, he felt a deep sense of duty to other activities in his community. He was instrumental in the organization of the Rotary Club 36 years ago. He was the first president

of the club. He was a devoted church member, an active member of the Methodist Church, an assistant teacher of the Men's Bible Class for many years and a member of the Board of Trustees. He was active in the American Legion, being Commander of Pitt County Post in 1921 and 1922. He was president of the First National Bank in Ayden during the trying years of the early 30's and until 1937.

Because of his faithful service to his community, to his profession, to the cause of public health and to the well-being of the State of North Carolina, the North Carolina State Board of Health wishes to express its appreciation of the life that he lived and the high service which he rendered to his native State.

THEREFORE, be it Resolved, That a copy of this expression of appreciation be published in the North Carolina Medical Journal; The Health Bulletin; a copy placed in the minutes of the Board of Health, and that a copy be sent to Mrs. Dixon and his sons.

John H. Hamilton, M. D., Chairman  
Lenox D. Baker, M.D.  
Z. L. Edwards, D. D. S.  
J. W. R. Norton, M. D.

## RULES AND REGULATIONS GOVERNING THE SANITATION OF HOTELS, MOTELS, INNS, TOURIST HOMES AND OTHER LODGING PLACES

RULES AND REGULATIONS DE-  
FINING HOTEL, MOTEL, INN, TOUR-  
PROVISIONS OF ARTICLE 5 OF CHAPTER 72 OF  
1ST HOME, PERMANENT HOUSE  
GUESTS, EMPLOYEES, STATE  
BOARD OF HEALTH, LOCAL  
HEALTH DIRECTOR, SANITARIAN,  
PERSON, ETC., REQUIRING PER-  
MITS FOR THE OPERATION OF  
HOTELS, MOTELS, INNS & TOURIST  
HOMES; PROVIDING FOR THE  
SANITATION INSPECTION, GRADING,  
AND PLACARDING OF SUCH  
ESTABLISHMENTS; AND PROVID-  
ING FOR THE ENFORCEMENT OF  
THESE RULES AND REGULATIONS.

For the purpose of carrying out the provisions of Article 5 of Chapter 72 of the General Statutes of North Carolina, as amended by the 1957 General Assembly, the North Carolina State Board of Health hereby adopts the following rules and regulations governing the sanitation of hotels, motels, inns and tourist homes:

SECTION 1. Definitions.—The following definitions shall apply in the interpretation and the enforcement of these rules and regulations:

A. Hotel, Motel, Inn, Tourist Home.—The terms "hotel", "motel", "inn", or

"tourist home" shall mean and include all hotels, motels, inns, tourist homes, and other places providing lodging accommodations for pay, not including private homes which provide lodging to permanent house guests.

B. Permanent House Guests.—The term "permanent house guests" shall mean guests who receive lodging accommodations for periods of a week or longer and who pay for such accommodations and the visitors of such guests.

C. Employees.—The term "employees" shall mean and include all janitors, maids, porters, and any others whose duties include the cleaning of rooms, toilets, or other parts of the building, or the carrying of ice or ice water to guests.

D. State Board of Health.—The term "State Board of Health" shall mean the State Health Director, or his authorized representatives.

E. Local Health Director.—The term "Local Health Director" shall mean the individual elected by the city, county, or district board of health to carry out the local program of public health.

F. Sanitarian—the term "Sanitarian" shall mean any authorized representative of the State Board of Health.

G. Lobby.—The lobby of any hotel, motel, inn, tourist home and other places providing lodging shall be construed to mean that room or area in which guests ordinarily register.

H. Person.—The word "person" shall mean individual, firm, association, organization, partnership, business trust, corporation, or company.

**SECTION 2. Permits.**—No person shall operate a hotel, motel, inn, or tourist home within the State of North Carolina who does not possess an unrevoked permit from the State Board of Health. No Permit to operate shall be issued until a sanitary inspection by a representative of the State Board of Health shows that the establishment complies with these rules and regulations. Permits issued to one person are not transferable to others.

Violation of any of these rules and

regulations shall be sufficient cause for revoking the permit. Receipt of a sanitation rating of less than 70%, or Grade C, shall make revocation of permit mandatory. No permit to operate shall be re-issued until the establishment has been re-inspected by a representative of the State Board of Health and found to comply with these rules and regulations.

**SECTION 3. Placarding or Public Display of Grade Notice.**—Whenever an inspection of a hotel, motel, inn, or tourist home is made, the State Board of Health shall issue a grade card, and it shall be the duty of the management or person in charge to remove the existing grade card and to post the new grade card in a conspicuous place, designated by the sanitarian, where it may be readily observed by the public. This grade card shall be kept posted at all times.

**SECTION 4. Re-inspections.**—Upon request of the management, a re-inspection will be made. In the case of establishments that have been closed for failure to comply with these rules and regulations, a survey to consider the issuance or re-issuance of a permit shall be made at the earliest convenience of the sanitarian, and an inspection for the purpose of establishing the sanitation grade may be made at any time after the establishment has been in operation for at least two weeks. In the case of establishments which request an inspection for the purpose of raising the grade, and which hold unrevoked permits, the sanitarian shall make an unannounced inspection after the lapse of a reasonable period of time, not to exceed 30 days, for the purpose of establishing a new grade.

**SECTION 5. Publishing Grades.**—At least twice annually, or whenever a survey of establishments has been completed, the grades shall be published.

**SECTION 6. Grading.**—The sanitation grading of all hotels, motels, inns and tourist homes shall be based on a system of scoring wherein all establishments receiving a score of at least 90% shall be awarded grade A; all establish-

ments receiving a score of at least 80% and less than 90% shall be awarded grade B; all establishments receiving a score of at least 70% and less than 80% shall be awarded grade C; and no establishment receiving a score of less than 70%, or grade C, shall operate. The scoring and grading of all hotels, motels, inns and tourist homes shall be based upon the following standards of construction and operation, and in accordance with the Inspection Form for Lodging Establishments which is attached and made a part of these regulations.

**Item 1. Lobby, Halls and Stairs.**—The lobby shall be provided with adequate lighting and ventilation, natural or artificial. All halls and stairs shall have reasonable ventilation and adequate artificial light. Floors, walls, ceilings, and windows shall be kept clean and in good repair. Furniture, fixtures, draperies, and other accessories shall be properly maintained and cleaned at reasonable intervals.

**Item 2. Toilets, Lavatories, Locker Rooms, and Baths.**—Every establishment shall be provided with adequate toilet, lavatory, and bathing facilities conveniently located, readily accessible, and conforming with the North Carolina Plumbing Code. Adequate toilet and lavatory facilities shall be provided for employees, and these facilities shall conform with the Rules and Regulations Governing Work Places and Working Conditions of the North Carolina Department of Labor. The lavatory and bathing facilities shall include hot and cold running water under pressure, individual towels and soap. Employees' locker rooms shall be kept clean, painted and orderly. Toilet and wash rooms shall be well lighted and ventilated to the outside air through windows, through ducts having cross-sectional areas of at least 72 square inches, or through forced-draft systems. The floor area shall be at least 18 square feet for the minimum-sized toilet room containing one commode and one lavatory, or one commode and one urinal, and shall contain

10 square feet in addition for each additional plumbing fixture. Floors, walls, and ceilings shall be constructed of smooth, nonabsorbent, washable materials; shall be painted with light-colored washable paint unless finished in tile or equal; and shall be kept clean and in good repair. Fixtures shall be kept clean and in good repair.

In the case of new establishments, baths shall be provided for each room or unit.

All liquid wastes, including those from commodes, lavatories, baths, sinks and floor drains, shall be disposed of in a public sewer system or, in the absence of a public sewer system, by a private sewage disposal system approved by the State Board of Health. Privies will not be permitted.

**Item 3. Water Supply.**—The water supply shall be adequate and of a safe, sanitary quality.

When a private water supply is used, it shall be constructed, maintained and operated in accordance with the requirements of the State Board of Health bulletin entitled "Protection of Private Water Supplies". A sample of the water, except in the case of public water supplies, shall be submitted to the State Laboratory of Hygiene for analysis at least once each year. No cross-connections with unapproved water supplies shall exist.

**Item 4. Drinking Water Facilities.**—Facilities for the dispensing of drinking water shall be of approved sanitary design. If water-cooling equipment is installed, it shall be of a type in which ice does not come in contact with the water. If drinking fountains are provided, they shall be of approved angle-jet type. Common dippers or common drinking glasses or cups shall not be used.

For room service, glasses and pitchers (or multi-use tubs), or single-service cups and single-service tubs, may be used, provided all multi-use utensils are washed thoroughly, subjected to approved bactericidal treatment, and stored and handled in a sanitary manner before being given to succeeding

guests. For the washing, bactericidal treatment, and storage of multi-use utensils, facilities meeting the requirements of Item 13 of the restaurant sanitation regulations shall be provided in a separate room. These utensils shall not be washed in room lavatories. Single-service cups, tubs, etc., shall be stored and handled in a sanitary manner. Clean glasses shall be individually wrapped.

Ice used for room service shall be manufactured from a safe water supply, shall be stored and handled in a sanitary manner, and block ice shall be washed. Where ice is made on the premises, the machines shall be located in a protected place; long-handled scoops shall be provided so guests or employees can dispense ice in a sanitary manner; and machines, equipment, utensils, and the room or area in which the machines are located shall be kept clean.

Ice storage bins shall not be used for any other purpose.

**Item 5. Bedrooms.**—Bedrooms shall have adequate lighting and ventilation, either natural or artificial. Lighting shall be adequate for reading and to enable thorough cleaning. Where natural ventilation only is provided, windows shall equal at least  $\frac{1}{6}$  of the floor area. Windows shall be kept clean and in good repair. In the absence of windows, adequate air conditioning and adequate artificial lighting constitutes satisfactory compliance.

There shall be at least 60 square feet of floor area and at least 500 cubic feet of air space for each intended occupant.

Approved window coverings shall be provided to insure privacy for guests, and shall be kept clean and in good repair.

Two sheets shall be provided for each bed. The lower sheet shall be of sufficient length to fold under both ends of the mattress where contour sheets are not used. The upper sheets shall be of sufficient length to fold under the mattress at the lower end, and to fold over the cover for at least

six inches at the top end. All sheets shall be of sufficient width to tuck under the mattress and shall be clean for each new occupant. All bed linens and furnishings shall be kept clean and in good repair.

The floors, walls and ceilings of bedrooms, closets, and storage areas shall be kept clean and in good repair. Furniture, shades, curtains, carpets and other accessories shall be cleaned at reasonable intervals and kept in good repair.

All lodging establishments shall be kept free of animals, fowl, bedbugs, rodents, roaches, flies, and other vermin. Bedrooms having outside openings shall be effectively screened unless air-conditioned.

**Item 6. Storage.**—Adequate storage rooms or cabinets shall be provided for all supplies, linens, and equipment. Clean linen shall be stored in cabinets, or on shelves in linen storage rooms. Cabinets, shelves, and storage rooms shall be kept neat, orderly and clean. Soiled linen shall be so handled and stored as not to come in contact with clean linen.

**Item 7. Requirements for Employees.**—Before permitting any person to work, the management shall require that each employee submit and keep on file with the management a medical health certificate signed by the local Health Director or a physician. Each health certificate shall be renewed at least annually. No employees who have contagious or infectious diseases shall be allowed to work in the establishment.

**Item 8. Disposal of Garbage and Trash; Premises.**—All garbage and trash shall be collected and stored in suitable receptacles in such manner as not to create a nuisance. Garbage shall be collected and stored in standard watertight garbage cans provided with tight-fitting lids. Garbage and trash shall be removed as frequently as may be necessary and disposed of in an approved manner. Garbage cans shall be kept clean. Waste material, obsolete and unnecessary articles, tin cans, rub-

bish, and other litter shall not be permitted to accumulate on the premises. There shall be no fly—or mosquito—breeding places, rodent harborage, or undrained areas on the premises. The premises shall be kept neat and clean.

**SECTION 7. Conflicting Rules and Regulations Repealed.**

All rules and regulations heretofore adopted by the State Board of Health which are in conflict with the provisions of these rules and regulations are hereby repealed.

**SECTION 8. Severability**

If any provision of these rules and regulations, or the application thereof

to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

**SECTION 9. Effective Date**

These rules and regulations shall be in full force and effect from and after October 1, 1958.

The foregoing rules and regulations were adopted at a meeting of the State Board of Health on July 17, 1958, at Raleigh, North Carolina.

Certified as a True Copy

J. W. R. Norton, M.D.

STATE HEALTH DIRECTOR

**NORTH CAROLINA STATE BOARD OF HEALTH  
INSPECTION FORM  
FOR  
LODGING ESTABLISHMENTS**

Permit \_\_\_\_\_ Score \_\_\_\_\_

City or County Health Department

Hotel, Motel, Inn, Tourist Home or Lodging Place Manager Address

Remarks: \_\_\_\_\_

1. LOBBY, HALLS, & STAIRS: Ventilation 10\*, illumination 10\*. floors, walls & ceilings clean & in good repair 20#, furniture & fixtures clean & in good repair 20#; screened 5\* \_\_\_\_\_ 65 \_\_\_\_\_
2. TOILETS: Approved water-carried sewerage & disposal 110\*, adequate for each sex & for employees 10\*, comply Building Code 5\*, size 5\*, ventilation 10\*, illumination 10\*, walls & ceilings smooth, painted & clean 30#, floors & fixtures clean & in good repair 40# \_\_\_\_\_ 110 \_\_\_\_\_

LAVATORIES, LOCKER ROOMS & BATHS: Lavatory & bath in each room, or convenient on same floor for each sex 40#, hot running water provided 30\*, floors & fixtures clean & in good repair 30#, walls & ceilings good repair, painted & clean 20# \_\_\_\_\_ 120 \_\_\_\_\_

3. WATER SUPPLY: Municipal supply or private supply 65*, (construction & operation approved according to Code) _____	65
4. DRINKING WATER FACILITIES, ICE HANDLING: Cooler, fountain or dispenser approved 20*, individual paper cups & tubs, or glasses & pitcher washed, rinsed, & sterilized 40#, approved facilities for washing, rinsing, sterilizing & storing glasses & pitchers, if used 40*, ice storage boxes, buckets, containers & ice machines clean & in good repair 30#, approved ice washing, scoops used, hands clean 30*, single service containers and/or glasses & pitchers stored in a sanitary manner 20# _____	180
5. BEDROOMS: Adequate ventilation 10*, adequate size 10*, screens 10*, illumination properly distributed 10*, shades, draperies, or blinds clean & in good repair 20#, two clean sheets each bed, folded under mattress & over cover 20*, bed clothing, pillows, mattresses & springs clean & in good repair 40#, floors, walls & ceilings clean & in good repair 40#, furniture & fixtures clean & in good repair 40#, closets or storage areas clean & in good repair 40#, no animals or bedbugs, rodents, roaches or other vermin 20* _____	260
6. STORAGE: Adequate for supplies, linen, other equipment & kept clean 20#, linen properly handled & stored 20# _____	40
7. EMPLOYEES: Health certificates on file, renewed annually 20*-- 20 _____	
8. DISPOSAL OF GARBAGE & TRASH; PREMISES: Garbage in standard cans with tight lids, removed frequently & can kept clean 40*, rubbish, tin cans, obsolete & unnecessary articles not allowed to accumulate on the premises 30#, no undrained areas, drainage ditches clean, no rat harborage or evidence of rats 30#, surroundings kept neat, orderly & clean 40# _____	140
TOTAL	1000

DATE \_\_\_\_\_ SIGNED \_\_\_\_\_ AGENT \_\_\_\_\_  
 N. C. STATE BOARD OF HEALTH

## RULES AND REGULATIONS GOVERNING THE DISPOSAL OF SEWAGE FROM ANY RESIDENCE, PLACE OF BUSINESS OR PLACE OF PUBLIC ASSEMBLY IN NORTH CAROLINA

For the purpose of carrying out the provisions of Section 130-160 of Article 13, General Statutes of North Carolina, the State Board of Health hereby adopts the following rules and regulations governing the disposal of sewage from any residence, place of business or place of public assembly in North Carolina.

### SECTION I—DEFINITIONS

For the purpose of these regulations the following definitions shall apply:

1. PERSON—The term "person" is defined to mean any individual, firm, organization, association, partnership, business, trust, corporation or company.

2. PRIVY BUILDING—The term "privy building" shall mean and include any and all buildings which are used for privacy in acts of urination and defecation which are not connected to a residential septic tank or community type sewerage system.

3. APPROVED PRIVY—The term "approved privy" shall mean a structure consisting of a pit, floor slab, and seat riser constructed in accordance with State Board of Health Bulletin No. 454, approved July 17, 1958, a copy of which is on file in the office of the State Health Director and each local health department.

4. SEPTIC TANK—The term "septic tank" shall mean a receptacle designed to collect the discharge from one or more toilets, lavatories, sinks or other plumbing fixtures.

5. NITRIFICATION FIELD—The term "nitrification field" shall mean a system of sub-surface drain lines which receive the septic tank effluent for distribution and absorption in the soil.

6. FILTER TRENCH—The term "filter trench" shall mean a system of sub-surface filtration where the sewage effluent is filtered through washed, graded sand and collected by means of open joint under drain lines for final disposal in running streams.

7. SEPTIC TANK SYSTEM—The term "septic tank system" shall mean the septic tank and nitrification field.

8. SEWER CONNECTION—The term "sewer connection" shall mean a connection with a community or public sewerage system which provides for the collection and disposal of sewage or other liquid wastes from the house or building.

9. RESIDENCE—The term "residence" shall mean and include any private homes, tenant house, hotel, motel, summer camp, labor work camp, trailer court, institution, or other places where people reside for any period of time.

10. PLACE OF BUSINESS—The term "place of business" shall mean and include any store, warehouse, manufacturing establishment, place of amusement or recreation, filling station, office building, or other places where people work.

11. PLACE OF PUBLIC ASSEMBLY—The term "place of public assembly" shall mean and include fair grounds, auditoriums, stadiums, churches, camp grounds, theatres, and other places where people congregate for religious, educational, or recreational purposes.

### SECTION II—SANITARY SEWAGE DISPOSAL REQUIREMENTS

Any residence, place of business or place of public assembly as defined above, located on the watershed of any source of water used for domestic purposes, or which shall be located within one mile of any other residence, place of business, or place of public assembly shall be provided with either an approved privy, septic tank constructed in accordance with the provisions of these regulations, or connection to a sewer system. Any other residence, place of business or place of public assembly, regardless of location, shall be provided with either an ap-

proved privy, septic tank or sewer connection when the State or Local Health Director determines that a condition exists which may be detrimental to the health of the residents or occupants of such residence, place of business, or place of public assembly, or to any other person or persons.

### SECTION III—CONSTRUCTION

#### A. APPROVED PRIVY

The "approved privy" shall consist of a pit, floor slab and seat assembly housed in a reasonable weather-proofed building.

1. The pit shall consist of an excavation at least 42 inches square and 5 feet deep.

2. The pit shall be properly curbed to prevent caving. In sandy or loose soil the curb should extend the full depth of the pit. In tight soils partial curbing is acceptable if it prevents caving.

3. The privy floor slabs shall be constructed of reinforced concrete as specified in State Board of Health Bulletin No. 454 except where it is impractical to secure or construct reinforced concrete floor assemblies. Wood construction will be accepted provided the floor slab is made of rough subflooring and covered with tight tongue-and-groove flooring or other type flooring materials to provide strength and prevent entrance of flies and mosquitoes to the privy pit. Where wood construction is used, floors shall be anchored to at least 4 x 4 sills.

4. Wood used for riser and seat assemblies shall be tongue-and-groove material.

#### B. SEPTIC TANK

1. The "septic tank" shall be of watertight construction, structurally sound and not subject to excessive corrosion or decay. Tanks of rectangular design, similar to that specified in State Board of Health Bulletin No. 519, approved July 17, 1958, a copy of which is on file in the office of the State Health Director and each local health department, are recommended. Tanks of other design may be approved by the State Board of Health upon a showing

that they comply with all other requirements of this section.

2. The minimum liquid capacity of any septic tank shall be 500 gallons for two bedroom houses or less and the minimum liquid depth shall be 36 inches.

The following table shall be used in determining capacities of residential type septic tanks.

NUMBER OF BEDROOMS	MINIMUM LIQUID CAPACITY OF TANK*
2 or less	500 gallons
3	600
4	750
5	900
6	1100

Septic tanks for commercial or institutional installations shall be sized according to accepted engineering practice and the size of each installation shall be determined on the basis of specific needs.

\*Whenever a garbage grinder is to be discharged to the septic tank, the tank volume should be increased 50%.

#### C. NITRIFICATION FIELD

The amount of nitrification field required shall be determined in accordance with soil percolation test results and the number of bedrooms in the dwelling for which the system is designed. The table below shows the minimum amount of nitrification field required.

Average time re- quired for water to fall one inch in minutes	Effective absorp- tion area (Area bottom of nitri- fication line) in sq. ft. per bedroom
2 or less	50
3	60
4	70
5	80
10	100
15	120
30	180
60	240

**NOTE 1:** A minimum of 150 square feet of absorption area per living unit shall be required.

**NOTE 2:** Whenever an automatic sequence type washing machine is to be discharged to the septic tank system, the nitrification field should be increased by 50%.

#### SECTION IV—MAINTENANCE OF APPROVED PRIVIES

Any person owning or controlling the property shall be responsible for Item Numbers A. 1, 6, and 7, and B. 1 as listed below regarding the maintenance of approved privies and septic tanks. The tenant or person occupying the property shall be responsible for Item Numbers A. 2, 3, 4, 5, and 8 and Item Numbers B. 2 and 3 regarding the maintenance of approved privies and septic tanks.

##### A. APPROVED PRIVIES

1. The privy building shall afford a reasonable degree of protection from bad weather conditions.

2. The walls, floor and seat of the privy and the grounds immediately adjacent to the building must be kept in a clean and decent condition.

3. Chickens and other animals shall not be harbored in the privy building.

4. Seat cover shall be hinged and closed at all times when privy is not in use.

5. Flies shall be excluded from the pit at all times. (Note: The application of a cup full of kerosene or used oil once each week will assist in controlling mosquito breeding and keep down odors.)

6. When the pit becomes filled to within 18 inches of the top of the ground, the privy building must be moved to a new pit and the old pit completely covered with earth.

7. If the pit should cave in, a new pit shall be provided.

8. Ashes, garbage and trash shall be kept out of the pit.

##### B. SEPTIC TANKS

1. Septic tanks shall be maintained at all times to prevent seepage of sewage or effluents to the surface of ground.

2. Septic tanks need occasional clean-

ing and should be checked at least each three years to determine if sludge needs removing.

3. Sludge removed from septic tanks shall be buried or plowed under, or disposed of in a manner approved by the Local Health Director.

#### SECTION V—PERMIT TO ENGAGE IN CLEANING SEPTIC TANKS

Any person other than the owner, tenant or manager of a residence, place of business, or place of public assembly, who engages in the business of cleaning septic tanks, shall register with the Local Health Director in the county where he operates and secure a permit before collecting and disposing of septic tank contents.

#### SECTION VI—VIOLATIONS

If any person shall willfully violate any rule or regulations adopted by the State Board of Health or shall willfully fail to perform any acts required by, or shall willfully do any act prohibited by such rules and regulations, he shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not to exceed \$50.00 or by imprisonment for a period not to exceed 30 days as provided in Article 22 of Chapter 130 of the General Statutes of North Carolina.

#### SECTION VII — CONFLICTING RULES AND REGULATIONS REPEALED.

All rules and regulations heretofore adopted by the State Board of Health which are in conflict with the provisions of these rules and regulations are hereby repealed.

#### SECTION VIII—SEVERABILITY

If any provision of these rules and regulations or the application thereof to any person or circumstance is held invalid, the remainder of the rules and regulations or the application of such provisions to other persons or circumstances shall not be affected thereby.

#### SECTION IX—EFFECTIVE DATE

These rules and regulations shall be in full force and effect from and after August 15, 1958.

The foregoing rules and regulations

governing the disposal of domestic sewage from residences, places of business and public assembly by the use of septic tanks, approved privies, or sewer connections were adopted at a meeting

of the State Board of Health on July 17, 1958 at Raleigh, North Carolina.

Certified as a true copy.  
J. W. R. Norton, M. D.  
State Health Director

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## A.M.A. To Alert Public Against Food Fads

The American Medical Association recently announced plans for a concerted program to alert the public to the dangers of substituting "food fads" for sound nutrition.

Dr. F. J. L. Blasingame, executive vice president of the A.M.A., pointed out that millions of Americans are influenced by nutritional products of questionable merit.

"We feel it is our duty to warn against abandoning the traditional 'three square meals a day' and the principles of sound nutrition for the pills and schemes of food faddists," he said.

The U. S. Food and Drug Administration and the National Better Business Bureau are cooperating with the A.M.A. in this program.

F.D.A. Commissioner George P. Larrick, Washington, D. C., in commenting on the problem said, "Our food supply is unsurpassed in volume, variety, and nutritional value; our medical care is unexcelled. Yet food faddists and some promoters circulate false ideas about food and nutrition which can be dangerous to health."

The A.M.A.'s educational program will be conducted via television, motion pictures, public meetings, newspapers, and magazines. Four educational aids, for use in the campaign, will be shown at the A.M.A.'s annual Public Relations Institute Aug. 27-28 in Chicago.

One is a 28-minute motion picture produced in Hollywood for use on television and for showings to club, church, and school groups. Titled "The

Medicine Man," the 16mm. black-and-white film exposes two types of nutritional "quacks"—the health food lecturer and the door-to-door food supplement salesman who makes unwarranted claims for his product.

A second aid in the campaign is a 20-foot exhibit designed for display at state and county fairs under the auspices of local medical societies. In addition to telling the facts about food supplements and health food lecturers, it will also expose weight reduction schemes and other nutritional "flim-flams."

Also to be previewed at the Public Relations Institute will be a brochure, "Beware of Nutrition Nonsense," and an article which will appear in the September issue of the A.M.A.'s magazine, "Today's Health."

To underscore the need for an educational campaign against food fadism, Dr. Charles S. Davidson, Boston, Mass., chairman of the American Medical Association's Council on Foods and Nutrition, said:

"Some Americans not only waste their money on food fads, but in many cases actually endanger their health. Federal agents have uncovered peddlers who claim their nutritional products will cure almost any disease."

"The greatest danger comes when sick people abandon accepted therapy to experiment with food fads or when they attempt to treat serious symptoms with nutritional products of unknown reliability instead of going to their family doctors for a checkup."

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# The Health Bulletin

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No. 9



**MODERN DISHWASHING  
BY MACHINE**

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List of free health literature will be supplied by local Health Departments or on written request.

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## Rules And Regulations Governing The Sanitation Of Restaurants And Other Foodhandling Establishments

RULES AND REGULATIONS DEFINING RESTAURANT, TEMPORARY RESTAURANT, FOOD STAND, DRINK STAND, TEMPORARY FOOD OR DRINK STAND, EMPLOYEE, EATING AND COOKING UTENSILS, STATE BOARD OF HEALTH, LOCAL HEALTH DIRECTOR, SANITARIAN, PERSON, ETC.; REQUIRING PERMITS FOR THE OPERATION OF RESTAURANTS, TEMPORARY RESTAURANTS, FOOD STANDS, DRINK STANDS AND TEMPORARY FOOD OR DRINK STANDS; PROVIDING FOR THE SANITATION IN-

SPECTION, GRADING, AND PLACARDING OF RESTAURANTS, FOOD STANDS & DRINK STANDS; PRESCRIBING MINIMUM SANITATION REQUIREMENTS FOR TEMPORARY FOOD OR DRINK STANDS; AND PROVIDING FOR THE ENFORCEMENT OF THESE RULES AND REGULATIONS.

For the purpose of carrying out the provisions of Article 5 of Chapter 72 of the General Statutes of Carolina, as amended by the 1957 General Assembly, the North Carolina State Board of Health hereby adopts the following

rules and regulations governing the sanitation of restaurants, temporary restaurants, food stands, drink stands, and temporary food or drink stands:

**SECTION 1. Definitions.**—The following definitions shall apply in the interpretation and enforcement of these rules and regulations:

A. Restaurant, temporary restaurant, food stand, drink stand, and temporary food or drink stand:

1. The term "restaurant" shall mean and include restaurants, coffee shops, cafeterias, short order cafes, luncheonettes, school lunchrooms, delicatessens, and all other establishments where food is prepared, handled, and/or served at wholesale or retail for pay; as well as sandwich manufacturing establishments, kitchens, and all other places in which food is handled or prepared for sale elsewhere.

2. The term "temporary restaurant" shall mean a restaurant, as defined above, which operates for a period of one week or less, as in connection with a fair, carnival, circus, public exhibition, or other similar gathering.

3. The term "food stand" shall mean and include those food service establishments which limit the food items prepared to sandwiches, hand out foods in single-service containers or similarly restricted food items. Such food stands provide no dishes, glasses or silverware, no curb service, no tables or stools. Facilities usually provided by restaurants for the convenience and comfort of their guests are not to be found in the case of food stands.

4. The term "drink stand" shall mean and include those establishments such as soda fountains, taverns and similar places in which no food is prepared on the premises, but where drinks are served in containers (glasses, mugs, etc.) other than bottles, cans, or paper cups.

5. The term "temporary food or drink stand" shall mean and include those food or drink stands which operate for a period of one week or less, as in connection with a fair, carnival, circus, public exhibition, or other similar gath-

ering.

B. Employee.—The term "employee" shall mean any person who handles food or drink during preparation or serving, or who comes in contact with any eating or cooking utensils, or who is employed at any time in a room in which food or drink is prepared or served.

C. Eating and Cooking Utensils.—The term "eating and cooking utensils" shall include any kitchenware, tableware, glassware, cutlery, utensils, containers, or other equipment with which food or drink comes in contact during storage, preparation, or serving.

D. State Board of Health.—The term "State Board of Health" shall mean the State Health Director, or his authorized representatives.

E. Local Health Director.—The term "Local Health Director" shall mean the individual elected by the city, county, or district board of health to carry out the local program of public health.

F. Sanitarian.—The term "Sanitarian" shall mean any authorized representative of the State Board of Health.

G. Person.—The word "person" shall mean individual, firm, association, organization, partnership, business trust, corporation or company.

**SECTION 2. Permits.**—No person shall operate a restaurant, temporary restaurant, food stand, drink stand, or temporary food or drink stand within the State of North Carolina who does not possess an unrevoked permit from the State Board of Health. No permit to operate shall be issued until a sanitary inspection by a representative of the State Board of Health shows that the establishment complies with these rules and regulations. Permits issued to one person are not transferable to others.

Violation of any of these rules and regulations shall be sufficient cause for revoking the permit. Receipt of a sanitation rating of less than 70%, or Grade C, shall make revocation of permit mandatory. No permit to operate shall be reissued until the establishment has been re-inspected by a representative of the State Board of Health.

and found to comply with these rules and regulations.

**SECTION 3. Placarding or Public Display of Grade Notice.**—Whenever an inspection of a restaurant, food stand, or drink stand is made, the State Board of Health shall issue a grade card, and it shall be the duty of the management or person in charge to remove the existing grade card and to post the new grade card in a conspicuous place, designated by the sanitarian, where it may be readily observed by the public. This grade card shall be kept posted at all times.

**SECTION 4. Re-inspections**—Upon request of the management, a re-inspection will be made. In the case of establishments that have been closed for failure to comply with these rules and regulations, a survey to consider the issuance or re-issuance of a permit shall be made at the earliest convenience of the sanitarian, and an inspection for the purpose of establishing the sanitation grade may be made at any time after the establishment has been in operation for at least two weeks. In the case of establishments which request an inspection for the purpose of raising the grade, and which hold unrevoked permits, the sanitarian shall make an unannounced inspection after the lapse of a reasonable period of time, not to exceed 30 days, for the purpose of establishing a new grade.

**SECTION 5. Publishing Grades.**—At least twice annually, or whenever a survey of establishments has been completed, the grades shall be published.

**SECTION 6. Grading.**—The sanitation grading of all restaurants, temporary restaurants, food stands, and drink stands shall be based on a system of scoring wherein all establishments receiving a score of at least 90% shall be awarded Grade A; all establishments receiving a score of at least 80% and less than 90% shall be awarded Grade B; all establishments receiving a score of at least 70% and less than 80% shall be awarded Grade C; and no establishment receiving a score of less than 70%, or Grade C, shall operate. The scoring

and grading of restaurants, temporary restaurants, food stands, and drink stands shall be based upon the following standards of construction and operation, and in accordance with the Inspection Form for Restaurants and Foodhandling Establishments which is attached and made a part of these regulations; the scoring and grading of temporary restaurants, food stands and drink stands shall be in accordance with the further provisions of Sections 7 and 8 of these rules and regulations.

**Item 1. Floors.**—The floors of all rooms in which food is stored, prepared, or served, or in which utensils are washed, shall be of such construction as to be easily cleaned, shall be smooth, shall be free of cleaning obstacles, and shall be kept clean and in good repair. The floor area shall be sufficient to accommodate all operations. Floors may be of concrete, terrazzo, tile, tightly laid tongue-and-groove lumber, wood covered with composition flooring or equal.

For new construction, it is recommended that the joints between walls and floors be rounded, or provided with tight molding to expedite cleaning.

**Item 2. Walls and Ceilings.**—Walls and ceilings of all rooms in which food is stored, prepared, or served shall be kept clean and in good repair.

The walls of kitchens and other rooms used for the preparation of food and the washing of utensils shall be smooth, washable, and light colored; and ceilings shall be of the same construction, provided that acoustical ceiling material may be accepted where effective ventilation precludes the possibility of grease absorption. Acceptable wall materials include light-colored glazed tile and smooth painted plaster, wood or metal. Brick, cinder blocks, slag blocks, and concrete blocks are acceptable if plastered or filled so as to provide a smooth, easily-cleanable surface and if painted, where necessary, a light color.

The walls and ceilings of all food storage rooms shall be finished in a light color.

The walls and ceilings of the dining rooms and other food serving rooms shall be of sound construction and free of excessive decorations. Artistic wall treatments with sections of brick or ornamental stone, natural wood finishes, etc. are acceptable in dining rooms.

**Item 3. Doors and Windows.**—When flies are prevalent, all openings into the outer air shall be effectively screened unless other effective means are provided to keep the establishment reasonably free of flies. Outside doors shall be self-closing; may be solid or screened, and preferably shall open outward. Screen doors on kitchens shall open outward. Absence of flies shall be considered compliance with this item.

**Item 4. Lighting.**—All rooms in which food is stored, prepared, or served, or in which utensils are washed, shall be provided with illumination, either natural or artificial, that is adequate for all necessary operations.

**Item 5. Ventilation.**—All rooms in which food is stored, prepared, or served, or in which utensils are washed, shall be adequately ventilated. Effective ventilating fans, range hoods with proper filters and fans, or both, shall be provided where necessary to eliminate excessive grease, smoke or odors. Ventilating equipment shall be kept clean and in good repair. Pantries and other storage rooms shall be ventilated sufficiently to prevent disagreeable odors. Effective air-conditioning systems constitute compliance with this item.

**Item 6. Toilet Facilities.**—Every establishment shall be provided with adequate toilet facilities conveniently located, readily accessible at all business hours, and conforming with the North Carolina Plumbing Code and The Rules and Regulations Governing Work Places and Working Conditions of the North Carolina Department of Labor. The floor area shall be at least 18 square feet for the minimum-sized toilet room containing one commode and one lavatory, or one commode and one urinal, and shall contain 10 square

feet in addition for each additional plumbing fixture. Floors, walls, and ceilings shall be constructed of smooth, nonabsorbent, washable materials; shall be painted with a light-colored washable paint unless finished in tile or equal; and shall be kept clean and in good repair. Toilet rooms shall be well lighted, ventilated to the outside air through ducts having cross-sectional areas of at least 72 square inches or through forced-draft systems, provided with self-closing doors, and kept free of flies and storage. Outside windows shall be screened. Fixtures shall be kept clean and in good repair. A booth open at the top shall not qualify as a toilet room. It is recommended that masonry floors be provided with floor drains to facilitate cleaning. Toilets for patrons shall be so located that the patrons do not pass through the kitchen to enter the toilet rooms and patrons' toilets do not open into kitchen. Intervening rooms or vestibules, if provided, shall not be less than 18 square feet in area, and shall be constructed and maintained in a manner comparable to the toilet rooms.

Appropriate signs shall be posted to advise the public of the locations and identities of the toilet rooms. Durable, legible signs shall be posted or stenciled conspicuously in each employee's toilet room requesting employees to wash their hands before returning to work.

All toilet wastes shall be disposed of in a public sewer system, or in the absence of a public sewer system, by a private sewage disposal system approved by the State Board of Health. Approved earth pit privies constructed and operated in accordance with the requirements of the State Board of Health may be accepted in locations where it is physically impossible to install water-carried sewage facilities.

**Item 7. Water Supply.**—Running water under pressure shall be easily accessible to all rooms in which food is prepared or utensils are washed. The water supply shall be adequate, and of a safe, sanitary quality.

When a private water supply is used,

it shall be constructed, maintained, and operated in accordance with the requirements of the State Board of Health bulletin entitled "Protection of Private Water Supplies". A sample of the water, except in the case of public water supplies, shall be submitted to the State Laboratory of Hygiene for analysis at least once each year. No cross-connection with unapproved water supplies shall exist.

Item. 8. Drinking Water Facilities.—Facilities for the dispensing of drinking water shall be of an approved sanitary design. If water-cooling equipment is installed, it shall be of a type in which ice does not come in contact with the water. Common dippers or common drinking glasses or cups shall not be used.

Glass-filters, if provided, shall be of a design which does not depend upon pressure from the rim of the glass for its operation. If drinking fountains are provided, they shall be of approved angle-jet type.

Note: This Item shall not be interpreted as prohibiting the pitcher service of ice water. See Item 9 for handling of ice.

Item 9. Storage, Handling, and Use of Ice.—Ice which is to be used in fountain drinks, ice water, tea, and coffee; or in connection with the chilling or serving of salads, vegetables, or cocktails shall be manufactured from a safe water supply, and shall be stored and handled in a sanitary manner. Storage boxes shall be covered, located away from sources of contamination, maintained in good repair, and kept clean. Storage bins or boxes shall be provided with rims and covers designed to exclude spillage and drip. Ice grinders, pans and buckets used in preparing chipped or crushed ice shall be protected from contamination, thoroughly cleaned between usages, and kept in good repair; buckets and other containers shall be stored above the floor in a clean place. All block ice shall be washed before preparation and serving. Ice shall be put into glasses or other containers with a scoop, spoon, or other

approved method. Fountain ice compartments, bowls, buckets, or other containers shall be in good repair; frequently washed and kept free of scum, rust, etc.; and shall be protected from drip, dust, splash, and other contamination. Ice shall not be received, used or accepted when there is evidence that is it not being handled and transported in a sanitary manner. Ice machines shall be kept clean.

Item 10. Lavatory Facilities.—Adequate and convenient lavatory facilities, conforming with the N. C. Plumbing Code, including hot and cold running water and a combination supply faucet, soap and sanitary towels, or approved hand-drying devices, shall be provided for employees and guests. For employees, at least one lavatory shall be provided in the kitchen area in addition to any lavatories which may be provided at employees' toilet rooms, except where employees' toilets are immediately adjacent to the kitchen area. Dish-washing vats, vegetable sinks and pot sinks shall not be acceptable as hand-washing facilities for employees. The lavatories and adjacent areas shall be well lighted and kept clean and in good repair.

Item 11. Construction of Utensils and Equipment.—All eating, drinking, and cooking utensils, tables, sinks, cabinets, hoods, shelves and other equipment and fixtures used in connection with the operation of a restaurant shall be so constructed as to be easily cleaned and shall be kept in good repair. All surfaces with which food or drink comes in contact shall consist of smooth, not readily corrodible, non-toxic material, such as stainless steel, phenolic resin, marble slabs, or tight wood in which there are no open cracks or joints that will collect food particles and slime, and be readily accessible for cleaning.

Shelves, tables and counters shall not be covered with paper, cardboard, oil cloth, or other absorbent material, and shall be free of crevices. Table linen, if used, shall be kept clean and in good repair.

Note: The National Sanitation Foun-

dation has developed detailed specifications for many food service equipment items. Equipment which meets these standards shall be accepted as meeting the requirements of this item.

**Item 12. Storage Spaces.**—Storage spaces shall be kept clean and free from unnecessary articles and offensive or musty odors. The contents shall be neatly arranged to facilitate cleaning. All storage shall be at least 15 inches above the floor or otherwise arranged so as to permit thorough cleaning.

Dry beans, grits, flour, sugar, and similar food products should be stored in tightly covered metal cans, glass jars, or equal.

Shelves in storage rooms should be constructed approximately 1 inch from the wall, unless tightly stripped to eliminate cracks for roaches.

Bulky items should be stored on slatted shelves or movable dollies.

**Item 13. Cleaning and Bactericidal Treatment of Equipment and Utensils.**—All equipment and fixtures shall be kept clean. All cloths used by chefs and other employees in the kitchen shall be clean. Single service containers shall be used only once.

All multi-use eating and drinking utensils shall be thoroughly washed, rinsed, and subjected to an approved bactericidal treatment after each usage. The supply of eating and drinking utensils shall be adequate. All multi-use utensils used in the storage, preparation, cooking, or serving of food or drink shall be thoroughly cleaned and rinsed immediately after the day's operations, after each use, or upon completion of each meal as indicated.

Hand dishwashing facilities shall consist of an approved heavy gauge three-compartment sink of adequate size and depth, with hot and cold running water service for each vat, splash back protection continuous with the sink and an integral part of the sink, and drainboards on each end of ample size to accommodate the number of eating and drinking utensils involved.

Separate facilities shall be required when necessary for the washing of glasses, and, when needed, separate facilities shall be required for the washing of pots, pans, vegetables, fish, meats and poultry. The facilities for the heating of water shall be adequate and effective, and the storage capacity shall be ample.

When dishwashing machines are used, the machines shall be approved and shall be fitted with drainboards of ample capacity on each side, and include a countersunk sink, or other approved means for pre-cleaning, pre-flushing, or pre-soaking of the utensils in the dirty dish lane. Thermometers indicating the wash and rinse water temperatures shall be provided and kept in good repair.

Mechanical glass and dishwashing equipment shall be required when found necessary because of ineffective results with other facilities, or because of indicated volume. Dishwashing and glasswashing equipment shall be constructed and operated in accordance with National Sanitation Foundation standards or equal.

When dishwashing machines are used, the machines shall be approved on the basis of size, capacity and type for the number of utensils to be washed. Under some conditions, as when volume is limited and time permits, glasses may be washed with power-driven brushes and passed through door-type machines, which are, also, used for dishwashing, for final rinse and bactericidal treatment. For this method, a motor-driven glass-washer and a single vat sink may suffice.

When only single-service eating and drinking utensils are used, at least a single vat sink of adequate size with sufficient drainboard space on each end shall be provided.

#### *METHODS OF BACTERICIDAL TREATMENT*

In a manual operation after cleaning and rinsing, all multi-use eating and drinking utensils shall be effectively subjected to one of the following, or other equivalent bactericidal processes:

(By approved bactericidal process is meant the application of any method or substance for the destruction of pathogens, and all other organisms so far as practicable, and which is effective and does not adversely affect the equipment, food, drink, or the health of the consumer.)

(a) Immersion for at least one minute in the 3rd vat in clean hot water at a temperature of at least 170°F. An approved thermometer shall be available convenient to the vat. It is recommended that, wherever practicable, bactericidal treatment should be obtained through the use of hot water. Where hot water is used for bactericidal treatment, a booster heater of adequate capacity shall be provided for maintaining a water temperature of at least 170°F. in the 3rd vat at all times when utensils are being washed. The heating device may be integral with the immersion vat.

(b) Immersion for at least two minutes in the 3rd vat in an effective chemical bactericide of approved strength, including:

- (1) For chlorine products, at least 50 ppm of available chlorine
- (2) For iodophor products, at least 12.5 ppm of available iodine
- (3) For quaternary ammonium products and limited to glasses only, at least 200 ppm of QAC, provided that the product is labeled to show that it is effective in water having a hardness value at least equal to that of the water being used.

No article, polish, or other substance containing any cyanide preparation or other poisonous material shall be used for the cleaning or polishing of eating or cooking utensils. When poisons, such as insecticides, lye, etc. are used in a restaurant, a special cabinet for storage of these materials shall be provided and plainly marked.

Note: Restaurateurs who plan new or remodeled establishments are urged to submit their kitchen layouts to the State Board of Health for review and approval.

This is a wise procedure to insure layouts will meet modern standards of sanitation as well as efficiency.

Item 14. Storage and Handling of Utensils and Equipment.—After bactericidal treatment, utensils shall be stored above the floor in a clean place. Wherever practicable, containers and utensils shall be covered, or inverted, or stored in tight, clean cabinets; and glasses and cups should be stored inverted in sanitary racks. Utensils shall be handled in such a manner as to prevent contamination, and employees shall avoid handling clean surfaces that will come in contact with customers' mouths.

Drain racks, trays, and shelves shall be made of not readily corrodible material, and shall be kept clean.

Spoons, spatulas, dippers, etc., used for dispensing frozen desserts shall be kept, when not in use, in dipper wells with running water.

Single service utensils shall be purchased only in sanitary containers, shall be stored therein in a clean, dry place until used, and shall be handled in a sanitary manner. Laundered table linen and cleaning cloths shall be stored in a clean place until used.

Item 15. Disposal of Wastes.—Liquid wastes, including those from sinks, lavatories, floor drains, and cleaning operations, shall be disposed of in a public sewer, or, in the absence of a public sewer, by a method approved by the State Board of Health. Plumbing shall comply with the State Plumbing Code.

Garbage shall be collected and stored in standard watertight garbage cans provided with tight fitting lids so as to exclude flies, rats, and animals. Lids should be kept in place, except for cans inside the kitchen which are being used frequently during normal operations. The contents of these cans shall be removed frequently, and the cans thoroughly washed inside and outside. Adequate facilities shall be provided for the washing and storage of all garbage cans. Garbage and trash, including tin

cans, resulting from the restaurant operations shall be removed from the building as frequently as may be necessary and disposed of in an approved manner.

**Item 16. Protection of Food.—**

(a) **Refrigeration**—All perishable food or drink shall be kept at or below 50°F., except when being prepared or served. Thermometers shall be provided in all refrigerators. A storage temperature of 40°F. is recommended, especially for food and drink to be stored several days. All prepared custards and custard fillings, including custard-filled pastries which are not intended for hot service, should be cooled within one hour to 40°F.

(b) **Wholesomeness of Food**—All food and drink shall be clean, wholesome, free from adulteration and spoilage, and shall be handled and served in such a manner as to prevent contamination, adulteration, and spoilage. Foods that are spoiled, or otherwise unfit for human consumption shall be immediately disposed of as garbage.

Perishable foods such as fresh meats, poultry, and ready-prepared barbecue, potato salad, and chicken salad, shall be obtained from approved sources and shall be properly identified. Potato salad, chicken salad, etc. prepared for serving in the restaurant or for delivery to other establishments shall be cooled to 50°F. or below unless served or delivered within 3 hours after preparation; restaurants receiving such items shall place them under refrigeration immediately after receipt. Barbecue and other perishable cooked foods prepared for serving in the restaurant or for delivery to other establishments shall be kept at 143°F. or above, or cooled to 50°F., or below, unless served or delivered within 3 hours after preparation; restaurants receiving barbecue shall place it in storage immediately under the above temperature conditions.

**Note:** When food in large containers is placed in the refrigerator, the center portions cool very slowly because of the insulating

effect of the food itself. Chilling on ice tables, frequent stirring, and the substitution of shallow containers, with food in layers not more than 4" thick, are some of the measures that can be taken to promote rapid cooling.

(c) **Shellfish**—All shellfish shall be obtained from sources approved by the State Board of Health, provided that if the source of clams, oysters, or mussels is outside the State, the shipper's name shall be on the approved list issued by the United States Public Health Service, and provided that if the source of cooked crustacea meat is outside the State, the establishment in which the crustacea meat was packed is approved by the State or territory of origin, attested by the appearance of an official permit number on the container.

**Note:** Crustacea meat includes crab, lobster, crayfish, and shrimp. Shell oysters and clams shall be stored in a clean, well drained room or bin provided especially for that purpose. If in bags, boxes, or barrels, the container shall bear a standard identification tag on which appears the name, address, and permit number of the shipper. Shucked oysters, clams, and cooked crusacea meat shall be stored in the original shipping container on which appears the shipper's permit number.

(d) **Re-serving of Food**—Portions of food once served to customers shall not be served again.

(e) **Storage, Handling, and Display of Food**—All unwrapped or unenclosed food and drink on display shall be protected in such manner that the direct line from the customer's mouth to the food shall be intercepted by glass and shall be otherwise protected from public handling or other contamination, except that approved hand openings may be permitted on counter fronts. This requires standard counter protector installations for all cafeteria count-

ers so as to prevent contamination by customers' coughing and sneezing. Customer self-service is permitted only under the following conditions:

1. Buffet-style or Smorgasbord Service. This style of service is not acceptable for serving large numbers of people on an unrestricted basis, unless protective shields, equivalent to cafeteria counter protectors, are provided to intercept contamination; however, buffet-style or smorgasbord service is acceptable for occasional meals for limited numbers of customers. When food is served buffet or smorgasbord style:

- a. Highly perishable dishes shall be replaced at least hourly.
- b. Food containers shall be arranged conveniently so customers' clothing does not come in contact with food.
- c. Long-handled servings spoons, tongs, etc. shall be provided and used.
- d. Management shall not permit customers to touch foods on display.

2. Family-style Service.—In establishments featuring this style of service, patrons elect to participate in the family dining-table type of service. Ordinary serving dishes and utensils are acceptable.

Foods, except raw vegetables which are to be cooked, shall be kept under cover when not in the process of preparation and serving. Food shall not be stored in direct contact with ice. Meat and other perishable foods shall not be stored on the floor, or in direct contact with shelves and racks of cold storage boxes, or permitted to come in contact with dirty clothes, newspapers, pasteboard, previously used paper, or other contaminated surfaces. Special attention is directed to bread which is permitted to contact the outer surface of the wrapper. If open dishes and pans containing food are stacked, food shall be protected with wax paper or foil. Food transported to a restaurant shall not be accepted unless properly wrapped, covered, or otherwise protected. Food or drink shall not be served to the

general public in the kitchen. In the case of "drive-in" restaurants, all food shall be covered or wrapped before delivery to patrons' vehicles, to exclude flies, dust and other contamination.

All sugar bowls, and containers for onions, slaw, mustard, and other condiments shall have covers and be kept covered when not in use. Where sugar bowls containing loose sugar are used, clean dispensing spoons shall be provided. The thawing of frozen foods shall be done in an approved manner. Waiters and waitresses shall avoid unnecessary handling of butter, pies, and other foods in the process of serving. Good foodhandling methods and good personal hygiene practices are important in the protection of public health. Every opportunity to benefit from foodhandler courses, current literature, and modern practices should be used by the management and employees.

The establishment shall be kept free of flies, rodents, roaches, ants, and other vermin, and animals and fowl shall not be permitted in a restaurant, provided that Seeing Eye dogs accompanying blind persons shall be exempted. All supplementary means necessary for the elimination of flies, such as the installation of fly-repellent fans, and the routine use of approved insecticides shall be employed.

Dustless methods of floor cleaning shall be used, and all except emergency floor cleaning shall be done during those periods when the least amount of food and drink is exposed, such as after closing, or between meals.

Sandwich manufacturing establishments and delicatessens shall meet the applicable requirements of these regulations.

**BARBECUE PLACES.**—The following standards shall be followed in the application of the restaurant sanitation requirements of this Section in the grading of establishments preparing barbecue:

(a) Barbecue pits:

(1) Barbecue pits and barbecue machines shall be enclosed in a room protected from the weather, dust, flies,

and animals. Light shall be ample to promote cleanliness. The room shall be kept clean and free of garbage, rubbish and other miscellaneous storage.

(2) Floors shall be constructed of smooth concrete or equal and graded to drain.

(3) Floors, walls, and ceilings shall be kept reasonably clean and free of dust, cobwebs, or other accumulations.

(4) Water under pressure shall be provided in barbecue pit rooms for floor cleaning.

(5) Barbecue pit rooms shall be properly ventilated by ducts, doors, or equal in order that smoke and fumes may be removed.

(6) Spits, holders, or racks shall be thoroughly cleaned daily.

(7) Barbecue shall not be chopped or processed in an outside pit room.

(b) Barbecue Chopping Rooms:

(1) Barbecue may be chopped and/or processed in a restaurant kitchen or in a room meeting the requirements of sanitation specified for restaurant kitchens and the sanitary handling of food therein.

(2) All equipment, sinks, etc. necessary for effective cleaning shall be provided.

Note: Suggested layouts and designs for barbecue pits are available from the Sanitary Engineering Division.

Item 17. Milk and Milk Products.—"Grade A" pasteurized milk and milk products shall be used. The term "milk products" shall be construed to mean and include buttermilk, cultured buttermilk, cream, and chocolate milk. Milk and milk products shall be served in the individual, original container in which they were received from the distributor, so that the name and grade of the contents and the name of the milk distributor may be observed readily by the consumers; provided that, sanitary bulk milk dispensers which have been approved by the State Board of Health may be used if so located and so labeled that the name and grade of the contents and the name of the milk distributor may be observed

readily by the consumers; provided further, that the milk dispenser may be installed in the food serving area of the kitchen if the label information required by this item is shown prominently on the menus or clip-on cards. Milk and milk products shall be stored in a sanitary manner and shall be kept refrigerated, except when being served. Bottles shall not be completely submerged in water.

An exception may be made in the case of cream served with coffee, cereals, etc., as the distributor cannot deliver cream in the unit sizes that would be required. For such service, transferring to individual service units from the original bottle, or from pumps, or other approved dispensers is permissible. The mixing of cream and milk or the pouring of either into jars, bottles, or other containers for storage therein shall be prohibited.

Bulk milk dispenser containers as received from the distributor shall be properly sealed, labeled with the name and grade of the contents and the identity of the distributor, and seals shall not be broken in the restaurant.

Item 18.—Requirements for Employees.—All employees shall wear clean outer clothing and shall be clean as to their person and methods of foodhandling. No employees shall use tobacco in any form while engaged in the preparation, handling, or serving of food. The hands of all employees handling food, drink, or utensils, shall be kept clean, and shall be washed before beginning work and after each visit to the toilet. Cooks and other kitchen help shall wear clean caps or hairnets, and coats or other special dress when on duty. Waiters and waitresses shall wear clean coats or special dress (uniforms) when on duty. Waiters and waitresses should wear some type of hair covering, such as caps, hairnets, or head bands, to prevent hair from falling into food.

Before permitting any persons to work, the management shall require that each employee submit, and keep on file with the management, a medical

health certificate signed by the local Health Director or a physician. Each health certificate shall be renewed at least annually. No employees who have contagious or infectious diseases shall be allowed to work in the establishment.

Item 19. Premises; Miscellaneous.—Waste material, obsolete and unnecessary articles, tin cans, rubbish, and other litter shall not be permitted to accumulate on the premises. There shall be no fly—or mosquito—breeding places, rodent harborages, or undrained areas on the premises. The premises under control of the management shall be kept neat and clean.

None of the operations shall be conducted in any room used for domestic purposes. Soiled linens, coats, and aprons shall be kept in containers provided for this purpose.

Section 7. Sanitation Requirements for Temporary Restaurants. — Temporary restaurants shall comply with all the requirements for restaurants as provided in Section 6, with the following exceptions:

(a) In Item 1, *Floors*, properly graded dirt floors covered with sawdust or shavings kept sprinkled or otherwise treated to keep down dust, are acceptable.

(b) In Item 2, *Walls and Ceilings*, temporary construction is acceptable, provided that flies are effectively excluded and dust is kept at a minimum. Walls may be of screening if the surroundings are kept dust-free by sprinkling or other dust treatment methods.

(c) In Item 6, *Toilet Facilities*, public toilet facilities provided on the grounds are acceptable if reasonably convenient and kept clean.

SECTION 8. Sanitation Requirements for Food Stands and Drink Stands.—Food stands and drink stands shall comply with all sanitation requirements for restaurants as specified in Section 6, with the following exceptions:

(a) In Item 6, only toilets for employees shall be required. These shall be adequate and convenient and shall comply in every way to the standards for restaurant toilets.

(b) In Item 10, only handwashing facilities for employees shall be required. These shall be adequate and convenient and comply with restaurant standards insofar as this item is concerned.

(c) In Item 13, single compartment sinks of adequate size, conveniently located with sufficient drainboard space on each end, shall be required for the washing of all multi-use containers, cooking and preparation utensils, and equipment. In the case of "drink stands" when glasses, mugs, etc. are used, the facilities shall equal those for the washing of similar items in restaurants.

(d) In Item 16, all operations incident to the storage, preparation, and dispensing of food and drink shall be conducted in a room or area protected from flies, dust, vermin, etc., and no free-standing booths, fountains, sandwich counters, etc. shall be permitted except as a part of some established, permanent building or business in which the foodhandling operations required may be carried out under satisfactory sanitary conditions.

It is the intent that all of the restaurant sanitation requirements shall be followed, except as noted above in paragraphs (a) through (d), which exceptions are made because food stands and drink stands represent limited activities, and, therefore, require less equipment and fewer facilities to operate in a sanitary manner.

SECTION 9. Minimum Sanitation Requirements for Temporary Food Stands and Temporary Drink Stands.—(These are food or drink stands which operate for a period of one week or less, as in connection with a fair, carnival, circus, public exhibition, or other similar gathering.) Temporary food stands and temporary drink stands are not subject to grading, but the following requirements shall be satisfied in order to qualify for a permit under Section 2:

(a) Temporary food or drink stands shall be located in relatively clean surroundings and kept in a clean and sanitary condition. They shall be so con-

structed and arranged that food, drink, utensils, and equipment will not be exposed to insects, dust, and other contamination. Protection against flies and other insects shall be provided by screening, or by effective use of fans. Sawdust, shavings, or equal may be accepted as satisfactory floors.

(b) Where food or griddles are exposed to the public or to dust or insects, they shall be protected by glass, or otherwise, on the front, top, and ends, and exposed only as much as may be necessary to permit handling and serving of the food.

(c) All griddles, warmers, spatulas, refrigerators, and other utensils and equipment, shall be cleaned routinely and maintained in a sanitary manner.

(d) Running water under pressure shall be provided. The water supply shall be of a safe sanitary quality. Provision shall be made for heating water for the washing of utensils and equipment.

(e) Facilities shall be provided for employees' handwashing. These may consist of a pan, soap, and single-use towels.

(f) Convenient and approved toilet facilities shall be provided for use by employees. Public toilet facilities provided on the grounds are acceptable if reasonably convenient, adequate, and kept clean.

(g) Adequate provision shall be made for the refrigeration of perishable food and drink, and the proper storage of other foods and equipment.

(h) Garbage and refuse shall be collected and stored in standard watertight garbage cans provided with tight-fitting lids. Garbage and refuse shall be removed at least daily and disposed of in a sanitary manner. Waste water shall be so disposed of as not to create a nuisance. Each operator shall keep his immediate premises clean.

(i) All food served shall be clean, wholesome, and free from adulteration. Highly perishable foods such as cream-filled pastries and pies, and salads such as potato, chicken, ham, crab, etc., shall not be served in a temporary food

stand. Hamburgers shall be obtained from an approved market or plant in patties separated by clean paper, or other wrapping material, and ready to cook. Wrapped sandwiches shall be obtained from an approved source. Poultry shall be prepared for cooking in an approved market or plant. Drinks served shall be limited to bottled drinks, bottled milk, coffee, or carbonated beverages from approved dispensing devices.

(j) Food prepared by local groups shall be prepared in an approved kitchen, and such groups shall maintain a record of the type and origin of such foods. These foods shall be prepared, transported and stored in a sanitary manner so as to be protected from contamination and spoilage.

(k) No person suffering from any disease transmissible by contact, or through food and drink, or who is a known carrier of germs of such disease, shall be employed in any capacity. A medical health certificate, signed by the Health Director, or a physician, certifying that the employee is free of any communicable disease, must be on file for each employee.

**EMPLOYEES' COOK TENTS.**—Employees' cook tents are exempt from these regulations if they serve show employees only, as evidenced by location of the tent away from public areas and the presence of a sign reading "For Employees Only".

If employees' cook tents also serve the public, they shall meet the requirements for temporary restaurants or temporary food or drink stands, depending upon the type of service. If multi-use eating or drinking utensils are used in the establishment, the temporary restaurant regulations shall apply. If only single-service eating or drinking utensils are used, the temporary food or drink stand regulations shall apply.

**SECTION 10. Notification of Disease.**—Notice shall be sent to the local Health Director immediately by the manager, or by the employee concerned, if he or any other employee contracts any

infectious, contagious, or communicable disease, or has a fever, a skin eruption, a cough lasting more than three weeks, or any other suspicious symptom. It shall be the duty of any such employee to notify the manager immediately when any of said conditions obtain, and if neither the manager nor the employee concerned notify the local Health Director immediately when any of said conditions obtain, they shall be held jointly and severally to have violated this Section. A placard containing this Section shall be posted in all toilet rooms used by employees, or dressing rooms or kitchens.

**SECTION 11. Procedure When Infection Suspected.**—When suspicion arises as to the possibility of transmission of infection from any employee or by any food or drink, the local Health Director is authorized to require any or all of the following measures:

(a) The immediate exclusion of the employee from employment in establishments covered by these rules and regulations.

(b) The immediate closing of the establishment concerned until no further danger of disease outbreak exists, in the opinion of the local Health Director.

(c) Adequate medical examinations of the employee and of his associates,

with such laboratory examination as may be indicated.

(d) Retention by the management of portions of all suspected foods for sampling by the local Health Director. Such portions shall be collected, stored and handled as specified by the local Health Director.

**SECTION 12. Conflicting Rules and Regulations.**—All rules and regulations heretofore adopted by the State Board of Health which are in conflict with the provisions of these rules and regulations are hereby repealed.

**SECTION 13. Severability.**—If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

**SECTION 14. Effective Date.**—These rules and regulations shall be in full force and effect from and after October 1, 1958.

The foregoing rules and regulations were adopted at a meeting of the State Board of Health on July 17, 1958 at Raleigh, North Carolina.

Certified as a True Copy

J. W. R. Norton, M. D.

STATE HEALTH DIRECTOR

**NORTH CAROLINA STATE BOARD OF HEALTH  
INSPECTION FORM  
FOR  
RESTAURANTS AND FOODHANDLING ESTABLISHMENTS**

PERMIT \_\_\_\_\_ SCORE \_\_\_\_\_

County or City Health Department

Name of Restaurant or Establishment	Manager	Address
Remarks: _____		

1. FLOORS: Tightly constructed & in good repair 10#, clean & no ragged linoleum, etc., nor obstacles to cleaning 20#; area sufficient for all operations 10*	40
2. WALLS AND CEILINGS: Smooth material of tight construction & in good repair 10#, painted 10*, clean & free from excessive decorations 20#	40

3. DOORS AND WINDOWS: Outside openings with effective screens and self-closing doors or effective fly-repellent fans 40#	40	_____
4. LIGHTING: Illumination adequate 10*, sufficient outlets properly located 10*	20	_____
5. VENTILATION: Ventilation adequate 10*, effective exhaust system if needed, clean & in good repair 20#	30	_____
6. TOILET FACILITIES: Approved facilities and approved disposal 90* (facilities adequate for each sex and race 10*, comply with Building Code 5*, size 5*, patrons' toilets not entered through kitchen 10*, doors self-closing 5*, ventilation, illumination 10*, signs 5*, floors, walls, and ceilings, smooth, painted, clean, and in good repair 20#, fixtures clean & in good repair 20#) (Approved privies where physically impossible to install water-carried sewage facilities 40#)	90	_____
7. WATER SUPPLY: Municipal supply 40*, private supply (construction & operation approved according to Code, adequate for all requirements) 40*	40	_____
8. DRINKING WATER FACILITIES: Cooler, fountain or dispenser of sanitary design 20*	20	_____
9. STORAGE AND HANDLING OF ICE: Ice machines, storage boxes, grinders, pans & containers clean 10*, good repair 5*, ice dispensed with scoops, block ice washed 10*	25	_____
10. LAVATORY FACILITIES: Adequate, convenient to kitchen & toilets & clean 10#, warm water with combination supply faucet 5*, good repair 5*, soap 5*, individual towels 10*, room or area clean and free from storage 10*, ventilation & illumination 5*	50	_____
11. CONSTRUCTION OF UTENSILS & EQUIPMENT: Easily cleanable construction with no breaks, chipped enamel or corrosion 20#, no chipped or cracked dishes, rusty or bent silverware 10#, tables, shelves & counters smooth; no cracks, oil cloth or paper 10#	40	_____
12. STORAGE SPACES: Clean 10*, contents neatly arranged & stored above floors 10#, no unnecessary articles 10*	30	_____
13. (a) CLEANING OF EQUIPMENT & UTENSILS: Clean cases, fountains, bars, counters, shelves, tables, sinks, meat blocks, refrigerators, stoves, hoods, milk shakers, grinders, etc. 40#; clean cloths used by employees 10*; eating & drinking utensils thoroughly cleaned after each use, and cooking utensils cleaned routinely by approved methods 60#; adequate three-compartment sink of smooth construction with adequate size drainboards attached, splash-back protection, hot & cold water piped to each vat; separate facilities for glass washing, if needed; dishwashing machine, if used, clean & provided with pre-wash facilities, and equipped with thermometers on wash & rinse lines; adequate hot water heating facilities 40#	150	_____

(b) BACTERICIDAL TREATMENT OF EATING AND DRINKING UTENSILS:	Approved bactericidal treatment after cleaning; immersed 1 minute in water at 170°F., or other approved process, thermometer provided; if machines are used, equipped & operated according to NSF standards 20*, adequate booster heaters 20*	40
14. STORAGE & HANDLING OF UTENSILS AND EQUIPMENT:	No handling of contact surfaces, stored in clean place protected from flies, splash, dust etc., inverted or covered when practicable 20#; single-service cups, plates, straws, trays, spoons, etc., and ice cream dippers properly stored & handled 10*	30
15. DISPOSAL OF WASTES:	Liquid wastes disposed of in an approved manner; garbage in standard cans with tight lids, removed frequently; facilities for cleaning, cans kept clean; other trash & rubbish in suitable receptacles 50#	50
16. PROTECTION OF FOOD:	(a) Perishable food stored below 50°F., or held above 143°F., as required 30#; (b) All food clean, wholesome, free from adulteration & spoilage; highly perishable items (see Regulations) from approved sources 30#; (c) Shellfish from approved sources, properly stored & handled (record permit Nos.) 15*; (d) Food once served to guest not re-served 10*; (e) Food kept under cover, not stored directly in contact with ice, shelves, etc., stored above floor, all food handled in a sanitary manner, no unnecessary handling of cooked food with hands in serving, no food served to public in the kitchen, no animals, fowls, rodents, roaches, etc., flies under control, no open display, floor cleaning only after closing or between meals by dustless methods 70	155
17. MILK AND MILK PRODUCTS:	Grade "A" Pasteurized Milk Products 30, (milk served in original containers, or from approved bulk dispenser properly located & labeled (See Regulations. Check dispenser can seals) 20*, cream handled properly 10*)	30
18. REQUIREMENTS FOR EMPLOYEES:	Clean coats & caps, or special dress, hands clean & good foodhandling practices used 30#; Health Certificates on file, renewed annually 10*	40
19. PREMISES: MISCELLANEOUS:	Premises kept neat & clean 30#; soiled linens, coats, aprons, etc., kept in containers 5*; restaurant not used for domestic purposes 5*	40
	TOTAL	1000

DATE \_\_\_\_\_ SIGNED \_\_\_\_\_ AGENT \_\_\_\_\_  
N. C. STATE BOARD OF HEALTH

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# The Health Bulletin

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Robert Charlton, health educator, Miss Ida Reid Cohen, supervising nurse, and Frank Nelon, senior sanitarian, discuss health education in the Public Health Program.

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List of free health literature will be supplied by local Health Departments or on written request.

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## Health Education—A Public Health Responsibility

By Grace H. Daniel, Chairman, Recruitment Committee, N. C. Association of Health Educators, and Health Education Consultant, Western N. C. Health Education Section, Local Health Division, N. C. State Board of Health.

### The Health Educator

—A member of the public health team

"It seems to me we need a health educator!" These were the words of a local health director as he and his staff were discussing their local health problems and ways in which they might solve them. Most health departments are finding that an educational approach is needed to meet present-day problems. Laws and services continue to be important parts of our public health program, but better understand-

ing is necessary if people—as individuals and as groups—are to develop sound personal health practices and take action for community health progress.

Education as part of the public health program is not new. For years physicians, nurses, and sanitarians have been teaching as they examined the baby, visited the home of the tuberculosis patient and inspected the restaurant. Mothers' classes, P.-T.A. talks and food handling schools are typical of the many educational activi-

ties which local public health workers have conducted for several decades. However, with the increasing emphasis on education, many health departments are considering the employment of full-time persons in this field. The unique contribution of the public health educator is through education, just as the unique contribution of the public health engineer is through engineering, or that of the public health nurse is to the broad field of nursing.<sup>1/</sup> The health educator on the staff neither supplants any other staff member nor lessens his responsibility for health education. He works with other staff members to strengthen the public health educational programs and with other community agencies and groups with programs related to community health.

The public health educator is concerned with the creation of public interest in health and the promotion of an awareness of health needs. He helps to develop opportunities for people to learn about health and to take constructive action toward improving it. What a health educator does will vary according to the needs of each community and the personal skills and past experiences of the individual. However, the work of the local health educator falls into the three large areas of (1) program planning and evaluation, (2) organization and promotion of health education activities and (3) extension of health education through communications.

Identifying health problems, mobilizing community resources into action and evaluating a program's effectiveness are accepted procedures in public health. The health educator plays an important part in this task as he works with staff members, other agencies and community groups to study health problems. In Gaston County the pre-school clinic records were planned in such a way that neighborhoods with low polio protection could be identified and educational programs planned specifically for these areas. The high infant death rate in Robeson County was the focus for detailed analysis and program-

planning to reach certain groups with definite information which would help improve infant health. A survey of educational programs within the Charlotte Health Department was a vital contribution to those planning adult education programs in that city. These are examples of how the health educator is constantly working to help staffs and communities assess their needs and resources and plan for action.

After identifying health needs and resources, the health educator shares in the organization of specific activities to stimulate constructive action for improved personal and community health. This is exemplified by the work with the health director and sanitarian in helping a group in Cabarrus Suburbia to study and make plans for a sanitary district and in Charlotte, where five neighborhood groups meet monthly to learn more about health problems and plan their own activities for improving community health. Often the responsibility for health is shared by many agencies, and the health educator helps in providing organization for coordinated educational efforts. The School Health Council in Buncombe County and the voluntary health agencies' approach to teachers in Rowan County are examples. The health educator assists civic and community groups to plan their health activities as part of the overall community programs, as when the Jaycees in Winston-Salem cooperated in a recent campaign for polio immunization, when the health educator in Charlotte helped the P.-T.A. to find and train volunteers to test eyes at the preschool conferences and at the present time, when the health educator in Alamance County is working with the Altrusa Club in an adult education project in one neighborhood. Helping our own staff members improve their skills in education is one of the major contributions of the health educator. In the Eastern District, the health educator is working with seven health departments on a three-day inservice training program

in health education.

All public health personnel are concerned with more effective communications. This is important both in working with individuals and in interpretation of services. The health educators assist in the selection and development of educational pamphlets and visual aids and in the organization and distribution of materials. Newspapers, radio, and TV offer opportunities for telling the story of public health to the public. The Guilford County Health Department recently televised its latest annual report through the cooperation of the local station.

The three health educators in the Health Education Section of the N. C. State Board of Health work in the same general areas—program planning, organization of activities and communications. Much of their work is with counties which do not have health educators on their staffs and in cooperative efforts with other State Board of Health consultants and other State agencies with health education programs.

The health educator as a member of the public health team was first demonstrated during the early forties, when the Public Health Service sent health educators to North Carolina to help with the many health problems which developed around the military training areas. These were followed by demonstrations financed by the Rockefeller General Education Board, N. C. State Board of Health, voluntary health organizations and school health funds. In this way more than half of our counties have had the services of trained health educators as staff members. Today the health educator is accepted as a regular member of the public health team. Nine counties have positions for health educators in their local health department budgets. Three health educators are employed in the Health Education Section of the N. C. State Board of Health, and another serves as Acting Chief of the Accident Prevention Section. As part of their

responsibilities they are concerned with opening new positions in local health departments and in recruiting qualified persons to take training for this work. In an effort to bring the services of a health educator to small health departments, there is now a health educator on loan from the Public Health Service, who is working with five health departments. This demonstration will serve as a test for the effectiveness of a health educator on a district basis in our less populated counties. North Carolina is one of the leading states in the employment of local health educators. Their work is recognized by schools of public health and international health agencies as outstanding examples of the educational approach to health problems. Students in the field of health education and community development are sent to these departments for first-hand experiences. Visitation and orientation for public health workers from many foreign countries have been arranged through the International Cooperative Assistance Programs. Health educators who have worked in North Carolina have been elected by both W.H.O. and I.C.A. for demonstrations in underdeveloped countries—the Philippines, Burma, Cambodia, Indonesia, Lebanon and others. We are indeed proud that the first chief of the Health Education Section of the N. C. State Board of Health is now Chief of the W.H.O. Health Education Division.

The public health educator receives his training from graduate study in schools of public health. The U.N.C. School of Public Health is one of the seven in the U. S. which offer training in health education. This has been a major factor in the development of the health education program in North Carolina. All of the health educators now employed in this State received their training at U.N.C. Fellowships and traineeships are often available for qualified persons who are interested in careers in health education. Further information on requirements, traineeships and job opportunities may be ob-

tained from the Health Education Section of the N. C. State Board of Health or from the Department of Health Education, School of Public Health, U.N.C., Chapel Hill, N. C.

1/Proposed Report on Educational Qualifications and Functions of Public Health Educators. A.P.H.A. Journal, Vol. 47, Number 1.

## NEED FOR POLIO VACCINATION DURING PREGNANCY STRESSED

Polio vaccination during pregnancy is important because it serves two purposes: combating the "extraordinary susceptibility" of pregnant women to the disease, and prolonging their infants' passive immunity.

These were the conclusions of five University of Minnesota researchers who studied 138 pregnant women. Their study is reported in the Journal of the American Medical Association.

More than 65 per cent of the women were found to be incompletely protected against the disease. After receiving two Salk vaccine shots during pregnancy, the proportion dropped to 18 per cent.

Before receiving the shots, 33.1 per cent showed immunity to all three polio viruses; 58.6 per cent to one or two types, and 8.3 per cent to none. After the shots 82 per cent were immune to all three types.

The study also indicated that vaccination during pregnancy lengthened immunity in newborn infants.

The authors explained that newborn infants are resistant to certain diseases as a result of receiving antibodies (agents which fight disease in the body) from a mother who has been immunized by natural infection or previous vaccination.

The duration of immunity depends on the amount of antibody present. The higher the antibody level, the longer the immunity lasts. By vaccinating the mother, her own antibody level—and her infant's—is raised.

The study showed that the infants eliminated about half of the polio anti-

bodies received at birth within five weeks. The length of immunity resulting from the remaining antibodies depended on the original antibody level. Some infants still showed some immunity at nine and 12 months of age.

The authors are Dr. Mauricio Martins da Silva, Dr. Konald A. Prem, Eugene A. Johnson, Ph.D., Dr. John L. McKelvey, and Dr. Jerome T. Syverton of the University of Minnesota Medical School, Minneapolis.

## EYE PROTECTION DISCUSSED BY A.M.A. COMMITTEE

Suspicions that fluorescent lighting may be injurious to the eyes are unfounded, a committee of the American Medical Association said recently.

"Fluorescent lighting is not harmful to the eyes. It does not cause visual discomfort if properly installed, maintained, and used," the A.M.A. committee on industrial ophthalmology of the Council on Industrial Health said.

The committee's findings are part of three special reports on eye protection in industrial plants which appear in the Journal of the A.M.A.

The study also revealed that:

—Ultraviolet energy from clear blue summer sky light is several times as great per foot-candle as fluorescent light.

—Light from some fluorescent lamps resembles daylight more closely than that from tungsten-filament lamps.

—Heat is the only known physiological effect produced from infrared energy found in present-day fluorescent lighting.

—Glare may occur in any lighting system and can be solved by proper installation and use.

—Noticeable flicker is usually eliminated in modern multiple tube fluorescent installations.

The committee recommends the use of guides set forth by the American Standards Association and the Illuminating Engineering Society to achieve the desired level of illumination.

In a second report to the council dealing with chemical eye injuries, the

committee said, "Water is still the most universally available, effective, and practical emergency first-aid treatment of eyes injured by chemicals."

"Published reports of research in the use of buffered neutralizing solutions," the committee said, "have failed to show superiority of buffer instillation over proper water irrigation."

Immediate and thorough flushing of chemicals from the eyes has brought about a tremendous saving of eyesight among industrial employees, they noted.

In a discussion of eye safety equipment, the committee stated that "eye disease is not caused by lenses in eye safety equipment.

"Substandard or improperly fitted lenses may cause annoyance and discomfort, but not disease."

Safety goggles should meet the specifications of the National Bureau of Standards, they said.

"The examination, fitting, and maintenance of eye protective wear should be under the supervision of an eye physician," the committee concluded.

Dr. Edmund B. Spaeth, Philadelphia, is chairman of the committee.

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#### PASTORAL COUNSELING SERVICE SET UP IN MEDICAL CENTER

A medical center outpatient service for persons needing religious counseling has been described by two North Carolina ministers.

Richard K. Young, Th.D., and Benjamin S. Patrick, Th.M., Winston-Salem, reported on the outpatient pastoral counseling service at North Carolina Baptist Hospital in the *Journal of the American Medical Association*.

It is one more example of the growing cooperation between medicine and religion in helping persons who are ill or who need help in solving their daily problems.

Outpatient counseling at North Carolina Baptist Hospital resulted from a program of intensive pastoral work with inpatients, the authors said. Many patients requested that the chaplain talk with members of their families. Many patients themselves returned for

counseling after their discharge from the hospital, and eventually local pastors began sending their patients to the hospital chaplain.

In 1953 a program of outpatient counseling was set up. In that year there were 1,621 visits. By 1957 the number had grown to 3,208, and people were coming to the service from three states.

The staff consists of 13 men, all ministers. Six are permanent members and seven are fellows or interns. "These counselors function in their roles of ministers—but ministers with special training and experience in understanding human behavior," the author said.

They deal with persons having typical problems of adjustment and make no attempt to handle cases of mental illness. When such patients appear, they are referred to the psychiatric clinic. Often such referrals are more easily made by chaplain-counselors than by local pastors, the authors noted.

Many problems are brought to the clinic. More than a third of the persons seen last year received marital counseling and many received "growth counseling"—growth in self-understanding.

The department looks on counseling as a religious process in which the individual is helped to realize more nearly the full potentials of his own personality, they said.

The outstanding advantage of a pastoral counseling service in a medical center is the availability of medical resources. If patients need medical care, they are referred to the medical departments. The medical staff and the chaplains realize that both play a part in the comprehensive care of the patient.

Another advantage is that counselors can be trained within the framework of interprofessional relationships. The medical and religious groups work closely together, exchanging information and learning from each other.

A promising development that has grown out of the North Carolina program is the opportunity for research,

they said. The hospital has employed a clinically trained minister to do research in pastoral care. As far as the authors know, this is the first time that a medical center has employed such a person.

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### PLASTIC LENSES AID MILLIONS

A 450-year-old theory for correcting faulty vision has been perfected to the satisfaction of four million Americans.

Advanced in 1508 by the Italian artist and scientist, Leonardo da Vinci, the theory called for placing a lens in direct contact with the eye.

Until recent years scientists have been thwarted by the fact that lenses they developed were found to be "unsafe, uncomfortable, and almost impossible to fit properly." This was reported in an article appearing in Today's Health, a publication of the American Medical Association.

The modern "invisible glasses," known as the corneal contact lenses, are tiny pieces of plastic, measuring about one third of an inch across, which rest comfortably on the corneas over the small area covering the pupils.

It is estimated by the article's author, Robert M. Eret, of Chicago, that nearly four million persons will be wearing these contact lenses by late 1958.

He said, "An increasing number of bespectacled seamen, pilots, athletes, policemen and outdoor workers have been freed by corneal contact lenses from the whim of wind, weather, and jarring motion."

The new type lenses are also becoming popular with actors, actresses, musicians and young men on the way up in business, who just want to look their best in public, he said.

According to the author, the advantages offered by the new lenses include:

—The ease with which the glasses are kept clean and free of grease, perspiration, and steam, because plastic doesn't attract grease. This enables the near-sighted to shave and shower without losing the soap.

—The return to the wearer of some

15 per cent of his side vision, lost when wearing spectacles.

—the restoration of two-way conversation; people can now look the wearer in the eye.

—The longer period of time that they can be worn as compared with the length for the old scleral type contact lenses. The corneal lens can be worn for periods up to 16 and 18 hours.

—The prescription will last at least three to five years, and possibly as long as 20 years. Prescriptions for common spectacles must be changed every year or two.

Benefits from the new plastic lenses have been expanded to include persons in the so-called "bifocal years"—usually after 40. Thought to be impossible until a few months ago, the close and distance vision corrections of bifocals can now be ground into corneal contact lenses.

While only four million persons soon will be wearing contact lenses, the author estimates that most of the 72 million suffering from defective sight can comfortably wear contact lenses.

"A few people with rare conditions of the eye and lid cannot be fitted, and others . . . simply can't tolerate having something placed against their eyes," the author concluded.

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### ALCOHOL'S EFFECT ON COMMON COLD EXPLAINED

Alcoholic beverages are helpful in fighting the common cold—at least in the early stages.

This was reported by Dr. Noah D. Fabricant, Chicago otolaryngologist, in the Archives of Otolaryngology, published by the American Medical Association.

Dr. Fabricant said, "Although consumption of alcohol is obviously not a cure for the common cold, its beneficial role in some persons can neither be minimized nor dismissed."

Alcohol has long been a popular remedy for warding off colds after chilling or exposure in inclement weather. It increases blood circulation, provides warmth and comfort, induces

drowsiness, and promotes a desire to rest.

According to Dr. Fabricant, "Once acted upon, the decision to rest in bed can serve a most useful purpose. Rest in bed diminishes the severity of the common cold, limits its spread to others, and reduces the frequency of complications."

But alcohol is valuable in fighting a cold in still another way.

A cold is preceded by a lowering of the temperature in the nasal passage and a constriction of blood vessels within the nose. The passage then becomes dry and the defense against the cold is weakened. This paves the way for acute infection, the doctor said.

The prime intent on discovering a cold in its early stages is to restore the nasal passage to its normal state. This can best be done by raising the temperature of the membranes.

In the test conducted by Dr. Fabricant, it was found that the nasal temperature could be raised after the consumption of alcohol.

Twelve persons, two with symptoms of a cold, were given one ounce of a blended whiskey. Temperatures were checked before the test began and again at 15 minutes intervals following the taking of the alcohol.

All twelve showed a nasal temperature rise within 30 minutes.

According to Dr. Fabricant, the results indicate the physiological usefulness of an alcoholic beverage during the very early stages of the common cold.

Bacteria or parasites are known to be a cause of some diarrheal diseases, but in about 65 per cent of cases no bacterial or parasitic cause can be found. It had generally been assumed that a number of viruses may be responsible for these illnesses, but a definite viral agent had never been isolated, they said.

In the New York outbreaks, ECHO virus type 18 was found to be associated with every case.

The two outbreaks occurred in July, 1956, at New York Hospital. Twelve of 21 infants in the premature nursery became ill. A detailed survey failed to show any noninfectious or bacterial cause for the outbreak.

Four days after the end of the first outbreak, a second occurred in a sick infant ward in the same hospital. Five babies became ill. The infection was apparently carried from one nursery to the other by a nurse from whom the virus had been isolated.

The authors listed several points that give support to the conclusion that the virus called ECHO 18 caused the outbreak: ECHO 18 was isolated from every infant who became ill, but not from those remaining well. The virus was found among infants in the premature nursery only during the course of the outbreak; it was not present before or after the epidemic ran its course. The second outbreak occurred after exposure to a nurse known to be infected, again showing a definite association between the presence of the virus and the appearance of diarrhea.

Of some interest was the course of the illness in premature infants, the doctors said. Considering their relatively poor response to bacterial infection, these infants "withstood their illness surprisingly well." The disease was mild, and they recovered soon.

The authors are Dr. Heinz F. Eichenwald, Alexander Ababio, B. A., and Drs. Albert M. Arky and Alan P. Hartman of the department of pediatrics, the New York Hospital-Cornell Medical Center.

#### EPIDEMIC DIARRHEA CAUSED BY VIRUS

Two outbreaks of epidemic diarrhea among hospitalized infants were found to have been caused by a virus, a group of New York researchers reported recently.

This is "the first instance in which a virus isolatable by laboratory methods has been shown to be a cause of diarrhea," they said in the *Journal of the American Medical Association*.

## **TETANUS-DIPHTHERIA TOXOID CALLED SAFE FOR ADULTS**

Adolescents and adults can now be immunized against diphtheria and tetanus without developing severe side reactions, a recent study has shown.

This was reported in the Journal of the American Medical Association by three California doctors who inoculated 62 adults with a new combined toxoid with favorable results.

Childhood immunization against diphtheria and tetanus is effective and safe. There has been a growing need for extending this childhood program into adolescent and adult groups, but, unfortunately, the frequency of their severe local and systemic reactions to existing toxoids has prevented widespread use, the doctors said.

They added that previous studies indicated that a satisfactory combined tetanus and diphtheria toxoid for adults could be produced and used. The new serum (Adult Dip-Tet) was prepared in accordance with specifications contained in the National Institutes of Health's minimum requirements. Used by the armed forces since 1955, the toxoid has only recently become available to physicians through normal distribution channels.

In the California test, 62 adults, more than half of whom were over 35 years of age, were given two injections of the combined toxoid at four week intervals.

"All 62 adults developed a good, solid immune status in response to two injections," the doctors reported. More important, they said "no severe local or systemic reactions were encountered following either of the immunization injections."

They also noted that further immunization can be obtained with the use of a third or booster shot. This should be given 6 to 12 months later.

The doctors—Beryl S. Graham, Los Angeles, and Henrik L. Blum and Thomas W. Green, both of Berkley—feel that "these results show that the excellent childhood immunization program can be extended into adolescence and adulthood without fear of excessive

reactivity and with confidence that good antitoxic immunity will be obtained."

## **SIMPLE RULES FOR CARE OF BURNS LISTED**

To minimize pain and suffering from burns—which cause more injury and death among children than any other accident—parents need to know how to identify and treat them.

Some rules, listed in Today's Health, an American Medical Association Publication, are:

—Because youngsters grasp anything within reach, never allow conditions to exist which lead to accidents; keep matches from children; keep pots from the edge of the range, and keep youngsters from fires.

—Determine quickly the degree of burns—first degree, the skin is red; second, the skin is blistered; third, the skin is charred.

—For first or simple second degree burns, coat the affected area with an antiseptic ointment or olive or baby oil. This relieves pain and prevents the skin from cracking and drying out.

—For deep second and third degree burns, call a doctor immediately, since shock and infection may occur. A layman should not try to treat either.

## **CHILDHOOD CALLED BEST TIME TO HAVE MUMPS**

There is much less likelihood of infection after exposure to mumps than to measles or chickenpox, a San Francisco physician said.

This "low order of communicability" probably accounts for the fact that so many adults escape the disease during childhood only to develop it in later years, Dr. Edward B. Shaw said in the Journal of the American Medical Association.

The best time for a person to have mumps is during childhood, when the possible complications are not very severe. In adulthood, mumps can be followed by serious—and sometimes lasting—complications.

In order to prevent the possibility of

severe adult infections, it might be desirable to deliberately expose a child to the disease, thus insuring lifelong immunity, Dr. Shaw said.

However, this introduces the potential risk of secondarily exposing adults who may then have the illness with greater severity and sometimes permanent damage.

There is no really reliable and predictable means of artificially inducing immunity. The best means of acquiring lifelong immunity is to have mumps before puberty, Dr. Shaw said.

He is clinical professor of pediatrics at the University of California Medical Center and chief of the communicable disease department at Children's Hospital, San Francisco.

#### **PROFESSIONAL TRAINING URGED FOR PHYSICALLY HANDICAPPED**

The investment of relatively small sums of money in the rehabilitation of handicapped persons for professions really pays off, a recent Oklahoma survey has shown.

In fact, professional workers in their working lifetimes will return to the state and federal government 60 times the amount of money invested in their rehabilitations, Dr. Jean S. Felton said.

That is his estimate of the amount to be paid in taxes alone by 190 persons now working in medicine and related fields after their rehabilitation by the Oklahoma State Division of Vocational Rehabilitation.

Because some people think that only craft, custodial or service workers are produced by vocational rehabilitation services, Dr. Felton surveyed the Oklahoma program between 1937 and 1957. He found workers in many professions, but studied carefully only those in medicine and related fields.

Dr. Felton, professor of preventive medicine at the University of Oklahoma School of Medicine, reported the study in the *Journal of the American Medical Association*.

The 190 handicapped persons were placed in 16 medical or paramedical

categories. Fifty-two became nurses (professional and practical); 35 laboratory technicians; 18 dental technologists; 17 physicians and 14 X-ray technicians.

There were 26 different disabilities, the greatest number being stable pulmonary tuberculosis (22.1 per cent). Others were polio after effects, 13.2 per cent; bone and joint disorders, 10.5 per cent, and visual defects, 8.4 per cent. Of the former tuberculosis patients, 62 per cent became laboratory or x-ray technologists.

The overall cost—paid by tax funds—for rehabilitating the patients was \$95,470, which averaged \$533 per person, with a range from no cost to \$5,282. Expenditures were made for training, physical examinations, prosthetic fees, doctors' fees, maintenance and supplies.

Not all clients represented direct costs, Dr. Felton said, since some received services, such as counseling, with no attached cost except overhead. The largest individual expenditure was for a patient who was assisted through medical school.

Dr. Felton estimated that the 190 persons would earn more than 34 million dollars from the time they completed training until they retired at 65. They would pay income taxes of more than 5 million dollars to the federal government and more than \$170,000 to the state.

This represents "a return on rehabilitation investment of over sixty-fold," he noted. This return "bespeaks the wisdom of rendering aid to those persons capable of undertaking professional curriculums."

In addition to producing financial gains, rehabilitation also helps fill needed occupational categories and, of course, helps restore the dignity of the individuals involved.

#### **OCCUPATIONAL SKIN DISEASES CAN BE PREVENTED**

Inflammation of the skin, the most common industrial disease, is largely preventable according to the American Medical Association's committee on oc-

cupational dermatoses.

Lack of personal cleanliness is the most important factor in the development of occupational skin disease, the committee said in a report in the A.M.A. Journal. The committee is part of the A.M.A.'s Council on Industrial Health.

Most cases of acute occupational dermatitis occur in young and new workers who possibly are less careful and who often fail to observe suggested hygienic practices.

Contact with chemicals accounts for 90 per cent of all industrial skin diseases, the report said. Petroleum products and greases; alkalies, including cement, and solvents lead the list of causative agents.

Physical agents, such as exposure to sun or heat; mechanical injuries; biological agents, such as bacteria, and plant poisons also cause dermatitis.

Factors predisposing to occupational skin disease are the condition of the skin itself and the conditions of the working environment, the report said.

Examples of how the skin may influence the development are: A person with blond or fair skin is more susceptible to light and heat injury than a person with darker skin. If a person has very oily skin and already has acne, the acne may be aggravated by exposure to oils. However, oily skin has greater tolerance for fat solvents, such as naphtha and turpentine.

The committee recommended several things that can be done in the working environment to limit the development of dermatitis.

A clean and well-ventilated plant is more likely to be free of irritating and sensitizing substances, especially when noxious dusts, vapors, mists, or fumes are produced.

Conveniently located washing facilities and frequent and careful washing by the workers tend to prevent long contact with dermatitis-producing substances. Efficient and mild skin cleaners should be readily available, and showers for use after work may be necessary.

The committee also said that protective clothing should be worn. The difference that protective clothing can make is noticeable in hot weather when workers wear less clothing. The incidence of skin diseases rises.

When wearing gloves or other protective clothing is not practical, protective ointments or barrier creams may aid in skin protection. One of the chief values, the committee said, of a protective cream is that the worker is more apt to remove it and any accumulated irritant by washing before eating and after work.

Medical treatment should be available when a worker develops a dermatitis. However, the committee warned against overtreating—and thereby aggravating—a disease. Many conditions quickly respond to simple treatment such as wet dressings and calamine lotion, along with control of the exposure.

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#### ACTOR SAYS THERE'S NOTHING WRONG WITH BEING OLD

Playing "grandpa" roles for 30 years has taught a famed Hollywood actor that there's really nothing wrong with being old.

In an article appearing in Today's Health, a publication of the American Medical Association, actor Walter Brennan said old people spend too much time being sorry for themselves.

"If they'd spend the same amount of time thinking up things they'd like to do or developing an interest in some sort of constructive activity, they'd have much less time for self pity," he observed.

The 64-year-old Brennan is well acquainted with the subject of growing old. In addition to his movie roles, he is currently the star of the TV program "The Real McCoys" in which he portrays Grampa McCoy. In real life the veteran actor has three children and 11 grandchildren.

From his own experience Brennan said there are certain things he is not going to do as a senior citizen. "First

of all," he said, "I'm not going to preach. That seems to me one of the surest signs of senility.

"Then I'm not going to bear any resentment toward anyone, any time; nor am I ever going to compromise any of the principles that have always been important to me.

"And, finally, I'm never going to stop thanking God every morning and evening . . . for all the blessings He's sent my way."

To this personal philosophy, the actor believes Grampa McCoy would add these tips:

—Stop feeling sorry for yourselves; seek out constructive activity.

—Keep your minds and muscles satisfactorily occupied.

—Retain and sharpen your sense of humor.

—Quit complaining and start being thankful.

—Give abundantly of yourselves in any way that you are able.

Brennan also said that he is against compulsory retirement for anyone. "People keep saying to me," he said, "Sure, that's fine for creative people like you. But how about machine tool operators or desk clerks or department store buyers?"

He answers, "Everyone is creative and every job is creative work—if you make it that way. If you don't, retirement isn't going to make any difference. The people who are bored and unhappy before retirement are going to continue the same afterward."

According to Brennan there are two things that can be done for oldsters. We can let them do for themselves as they are able and as much as they possibly can.

Second, we can make sure that the present younger generation is enlightened on what to do when they grow older.

---

#### **"SLEEP CHEATS" CAN'T CHEAT FOREVER**

Many Americans are "sleep cheats."

They're persons with a late-to-bed pattern which results in a sustained sleep shortage.

These "sleep cheats" are cheating only themselves and are taking chances on losing their jobs, their marriages, and even their lives, according to an article in Today's Health, an American Medical Association publication.

Sleep cheats are not to be confused with insomniacs, although their symptoms may be the same.

"Sleep cheats can sleep, but they won't. They go to sleep all right, but they don't go to sleep early enough," the article said.

All sleep cheats suffer some impairment of health. They can't stagger on forever. They have to settle up or eventually collapse from sheer exhaustion.

The signs of a chronic sleep shortage in the order they appear are:

—Poor timing and muscular control.

—Strained vision, with objects shifting size and shape.

—Impaired hearing, and reduced sense of touch, temperature, and pressure.

—Increased irritability, depression and discouragement.

If the sleep debt keeps increasing, there may be a tendency toward what some psychiatrists call "loss of reality." Fantasy oozes into fact, the article said.

Sleep cheats cheat for a variety of reasons. It may simply be a matter of money, as with the "moonlighter" who takes a night job to meet a family financial crisis. Some shun sleep, however, for neurotic reasons, as with the man-about-town who races frantically to find excitement as an escape from reality.

The best way to tell how much sleep is enough sleep is to try "getting up without an alarm clock for a while," the article said. "If you get to bed in time to wake up without an alarm and if you don't doze off during the day, you've gone to bed at the right time.

"Work out your sleep need over a stretch of several weeks in order to arrive at an accurate average, but remember that your need will vary with your activities."

The article was written by Theodore Irwin, Scarsdale, N. Y.

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the

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# TUBERCULOSIS CASE FINDING THROUGH CHEST X-RAY SURVEYS

BY WILLIAM A. SMITH, M.D.  
State Board of Health, Raleigh, North Carolina

## GENERAL

In the early days before the discovery of the x-ray the examination of the chest through the usual methods was attended by many missed diagnoses. The discovery of the x-ray in 1895 provided a greatly improved method of diagnosis but the unwieldy glass film and the expense of x-ray examination confined this type of chest examination to those few areas where x-ray machines were located. After the development of the lighter, flexible film in the early 1920's and less expensive x-ray machines the examination of the

chest by x-ray was done extensively. Activities in tuberculosis case finding by the North Carolina State Sanatorium Extension Service began in 1918-1919. A personal communication from Dr. C. D. Thomas, Western Sanatorium, explains the two types of clinics which were conducted, namely (a) the "Children's Clinic" and the Tuberculosis Survey of Schools and (b) the "Adult Clinic". In the tuberculosis survey of schools the examining physician tuberculin tested all children from the first to the twelfth grades inclusive; those children who showed

a positive reaction were x-rayed and given a physical examination. In the Buncombe County survey in 1933, conducted by Drs. McCain, Thomas and Summers, 9,482 children were tested; 11.7% showed a positive test, 889 of the positive reactors were x-rayed and of these 21.7% showed demonstrable lesions; 173 children showed the childhood type of tuberculosis, 9 children showed the adult type and 11 children showed both adult and childhood types and 111 showed suspicious lesions.

In the "Adult Clinic" chest examinations were made at the health department; 12 patients were examined daily with the stethoscope and also tuberculin tested. In most cases no x-ray was made.

Another survey of interest was conducted many years later and this was a survey by fluoroscope chest plates were not made) in the Philippine Islands from July 1, 1933 to September 30, 1934. Almost 60,000 persons were fluoroscoped and 4.85% showed pulmonary tuberculosis.

In 1935-36, the New York City Health Department conducted a survey in New York City among school children and adults. In three areas in which over 9,000 children were examined, the number of tuberculosis cases was negligible; however in another area (6,325) the prevalence of active tuberculosis was 3.8 per 1,000; or 24 in 6,325 children examined.

The x-ray examination of all applicants for city employment in New York City 1936-1937 showed active cases ranging from 1.3% - 2.2% and arrested cases 0.5% - 6%; and there was an incidence of 3.7% active tuberculosis among 3,214 persons examined on home relief, 1935-1936.

In 1936 an x-ray survey was made of C.C.C. applicants at Camp Dix, New Jersey. This group represented a cross section of young adults who for the most part were in the lower income bracket. Over 7,000 young men were x-rayed (7,405), 6,341 white and 1,064 colored. Defects were classified as follows:

a. Tuberculosis active	0.9 %
(70 cases)	
b. Tuberculosis, activity questionable (76 cases)	1.02%
c. Tuberculosis, no activity (376 cases)	5.0 %
d. Thickened pleura (104 cases)	1.4 %
e. Pneumonitis (29 cases)	0.39%
f. Heart, enlarged (60 cases)	0.81%
g. Other diseases—silicosis, fractures, severe scoliosis, etc. (33) sufficiently severe to raise a strong presumption of physical impairment	0.44%

It will be noted that these figures are cases per hundred and not cases per thousand. This was the tuberculosis situation 22 years ago among a group of young men who were for the most part in the low income group. In 1936, 3,633 Army recruits enroute to foreign duty showed 8 men or 2.2 per 1000 had disqualifying tuberculosis, and two disqualifying heart disease.

In the Camp Dix survey the paper 14x17 x-ray film was used. The miniature film came into use about this time and was the type film used during army mobilization in 1940.

#### CASE FINDING BY SERVICES

Tuberculosis cases are found through:

- Doctors' offices
- The routine chest x-ray of hospital admissions and clinic cases; this type examination should include mental hospitals, jails, and inmates of other penal institutions.
- The routine follow-up of tuberculosis contacts
- The examination of those persons who visit health departments for the purpose of attending clinics such as maternity and other clinics, and those persons who require health cards.
- Mobile x-ray surveys attempting to reach all segments of the population. These surveys should emphasize:
  - the older age group
  - low income neighborhoods
  - the negro population which

has shown a higher mortality and morbidity rate than the white population and

(d) migrants

#### a. CASE FINDING THROUGH DOCTOR'S OFFICES

A routine physical examination of any medical or surgical condition should include an x-ray of the chest. Most patients will object to the expense of a chest plate but there are many places where a chest x-ray can be made at no cost to the patient.

A review of the literature, 1937, shows that private physicians in a large mid-western city reported 43.7% of the total cases (3,680 cases) reported to the Board of Health. There were, however, 735 additional cases reported where private physicians had services in other than special tuberculosis hospitals and clinics and these additional cases would make a total of 63.8% reported by private doctors.

In 1953 a General Practitioner, in Washington, D. C., reported a series of 89 patients who were x-rayed in his office during the first six months of 1952. The ages of the patients x-rayed ranged from 3 years to 76 years and of the 89 patients x-rayed, he discovered four cases of active pulmonary tuberculosis in persons between 19 and 25 years of age. These persons necessitated immediate hospitalization and in addition to these four cases, he found two cases of silicosis.

In North Carolina in 1957, 305 new cases of tuberculosis or 18.4% of the total cases reported to the State Board of Health, were reported by private physicians and 19% of all new active cases were reported by private physicians.

#### b. ROUTINE CHEST X-RAY OF HOSPITAL ADMISSIONS AND CLINIC CASES

This procedure has been recognized as one of the most profitable case finding measures. However, in spite of all efforts to encourage this, only limited progress has been made in the direction of inducing general hospitals to develop such a case finding procedure.

In North Carolina in 1955, 15 general hospitals reported to the State Tuberculosis Association their results of this method of case finding. The State Board of Health inquired of these hospitals as to the findings and a reply to the inquiry was received from eight. Of the eight replying, four reported routine admissions alone; others included all x-rays of the chest taken on patients while in hospital. Those reporting correct information showed that for the year 1955, 22,816 persons were x-rayed and 176, or 7.7 per 1,000 showed evidence of tuberculosis of the lung.

The State Board of Health at one time had on loan three 4 x 5 x-ray machines in general hospitals. The machine on loan at the Duke Medical School x-rays 15-18,000 persons during a twelve-month period; the others 2-4,000 persons a year. Two of our units have been withdrawn at the request of the hospital and placed on loan in health departments. The findings at Duke in 1948 was 38.9 tuberculosis suspects per 1,000 persons x-rayed; in 1957 this rate declined to 7.6 per 1,000.

The Veterans Administration has conducted a thorough study of this type of case finding. During a period of 18 months, October, 1949—April, 1951, over 1,000,000 in-patients, out-patients and V. A. personnel were x-rayed. Inpatients and out-patients included veterans of World War II and other veterans; V. A. personnel included those persons on duty in tuberculosis hospitals, neuro-psychiatric hospitals, general medical and surgical hospitals.

Findings were of the total 1,091,708; total active 6,045; total inactive, 17,450; total suspected 7,729.

Suspects 28.6 per 1,000—active, inactive, suspected tuberculosis (a suspect is any person who shows x-ray findings, 14 x 17 plate, characteristic of pulmonary tuberculosis—either definite or suspected tuberculosis)

Active tuberculosis—5.5 per 1,000

Inactive tuberculosis—16 per 1,000

Suspected tuberculosis—7.1 per 1,000

Findings of new cases by clinical sta-

tus by the V. A., **in-patients in General and Neuro-Psychiatric hospitals** only show that among 482,120 persons x-rayed there were:

Active cases	7.4 per 1,000
Inactive cases	16.8 per 1,000
Suspected cases	9.6 per 1,000

Findings by extent of disease (active cases) in **in-patients, out-patients and personnel** are:

Minimal active	27.1%
Moderately advanced active	42 %
Far advanced active	30.9%

Observation of **in-patients** shows that the prevalence of active tuberculosis is approximately 45% higher among the older age group than among the young group and there was three times as much inactive tuberculosis among the older age patients as among the younger. Our emphasis at the State Board of Health has been to encourage the older age group to participate in surveys and our data comparing surveys conducted in 1949 and 1953 show that there has been a steady increase in participation of the age groups beginning with 30-34 years.

The V. A. report again shows that out-patients over 50 years of age had a prevalence rate of active tuberculosis almost twice that found among the younger group and an inactive rate three times as much.

**e. CASE FINDING BY HEALTH DEPARTMENTS. ROUTINE CHEST X-RAY**

There are now in North Carolina 69 health departments; 81 counties have 14x17 x-ray machines, and some health departments x-ray as many as 26,000 persons yearly. Routine chest x-ray examinations consist principally of those persons who require a health card such as food handlers, barbers, beauticians and school teachers, also tuberculosis contacts and those who attend prenatal and other clinics. In 1957 nine (9) counties examined over 93,000 persons; the number of tuberculosis "suspects" found was 1,966 of whom 1,455 were evaluated and of those evaluated there were 74 active cases; the number of new active and inactive cases were 82 or 0.88 per 1,000. The rate of active

cases found by health departments through routine chest plates is 0.79 among every 1,000 persons x-rayed which is slightly in excess of the 0.6 per 1,000 rate reported by the U. S. P. H. S. for community zone surveys, 1954-1956.

Some health departments in other states have set up programs for the routine chest x-ray of local jail inmates. In Hartford, Connecticut in 1953 the tuberculosis "suspect" rate was 61.8 per 1,000; new active 28.6 or five times the V. A. active rate of 5.5 in **in-patients, out-patients, and hospital personnel** and an inactive tuberculosis rate of 31.6 per 1,000.

**d. CASE FINDING THROUGH CHEST X-RAY SURVEYS USING MOBILE X-RAY UNITS**

A fourth method of case finding is by taking x-ray services to the population and not the population to the x-ray. This method has been practiced since the x-ray film was developed to the degree that such a method was practicable. This method of case finding has developed rapidly within recent years and is today considered a basic part of any modern tuberculosis program. To be effective, however, there must be well-planned and well-conducted health education as well as thorough follow-up of all suspected cases. These surveys find new undiagnosed cases in persons who have few if any symptoms and who visit the mobile units in response to strong educational pressure or from curiosity alone.

The Tuberculosis Control Section during the 13-year period of operations has x-rayed over 3,100,000 persons. The follow-up indicates that 5.5 persons in every 1,000 x-rayed show lung pathology characteristic of tuberculosis; all these "suspects", however, do not turn out to be clinical tuberculosis. Competent authority estimates that 60% to 80% of these "suspects" if followed from 2 to 4 years, do not turn out to be clinical tuberculosis, and it is, therefore, evident that an appreciable number of tuberculosis cases have been discovered through our efforts.

For the past two years the Tubercu-

losis Section, the Pamlico County Health Department, the N. C. Tuberculosis Association and the U. S. Public Health Service have been conducting a tuberculin testing study of citizens of Pamlico County. The study not only includes tuberculin testing of all persons one year and over but during 1957 a chest x-ray also. The study is expected to continue for a period of 5 years and can properly be termed a "Tuberculosis Study of a North Carolina Rural Community". Case finding results in the study are noted in this paper.

Three other surveys of interest have been conducted during the fiscal year 1957-58; namely a tuberculosis survey of industrial workers, a survey of a typical rural-urban community, and a survey of college students. The rural-urban survey was conducted in 1956, population of the county 67,788, and the combined population of the two largest towns was 26,682 or about 40% urban and 60% rural. The tuberculosis prevalence in the three communities, namely rural, Pamlico County; the industrial population and the rural-urban community should give an index as to the prevalence of tuberculosis in the State as a whole. Follow-up activities were conducted in Pamlico County for a period of one year; the strictly industrial population for a period of one year and the rural-urban survey for a period of three months. The rural-urban findings are, therefore, provisional. The follow-up will continue for a period of at least one year in order to determine firm results.

**(a). TUBERCULOSIS SURVEY OF  
A RURAL COMMUNITY—  
PAMLICO COUNTY**

**SUMMARY PAMLICO COUNTY SURVEY, TUBERCULOSIS CASES FOUND**

Total persons x-rayed — 6,095

Number of persons x-rayed,

20 years and over — 4,062

	Number tuberculosis cases found	Rate per 1000
Number new active cases	7	1.7
Number new inactive cases	7	1.7
Total new cases	14	3.4

**(b). TUBERCULOSIS SURVEY OF INDUSTRIAL EMPLOYEES 1957 (Textile)**  
 Number tuberculosis cases found      Rate per 1000

Number of persons x-rayed —	15,196	
Number of new active cases discovered	2	0.13
Number of new inactive cases discovered	17	1.1
Total	19 (all cases 20 yrs. and over)	1.2

Other lung pathology discovered:

Old inactive tuberculosis	— 3
Tumor of the lung	— 1
Fungus infection of the lung	— 1
Emphysema	— 1
Pulmonary scars	— 3
Pleural changes	— 1
Other chest pathology	— 3

The follow-up in this survey was conducted for a year.

**(c). TUBERCULOSIS SURVEY OF A TYPICAL RURAL-URBAN COMMUNITY 1958**

Population 1956 —	67,788	— approximately 40% urban, approximately 60% rural
Number and rate new active and probably active tuberculosis cases discovered	Number	Rate per 1000

14 (all cases 20 yrs. and over) 0.65

NOTE: The follow-up of this survey has continued for three months and will continue for a year in order to obtain more firm findings.

**(d). TUBERCULOSIS SURVEY OF COLLEGES IN THE VICINITY OF RALEIGH**

*Number examined in 1957	— 9,912
New active cases discovered	— 1
**Other pathology found	— 2 (Sarcoid) (bronchiectasis)

\*In one college with a student body of approximately 5,000 an x-ray of the chest is required before registration.

\*\*These cases were known cases.

**EXAMPLES OF YIELD OF TUBERCULOSIS X-RAY CASE FINDING ACTIVITIES IN CERTAIN POPULATION GROUPS**

Examples of yield of tuberculosis x-ray case finding activities in certain population groups, 1954-1956, were published by the U. S. Public Health Service, October 1957, and these results are tabulated below:

Population Groups	Number of Screening Films taken	Number of New Active TB cases Found	Rate of New Active TB Cases Brought to Diagnosis Per 1,000 Screening Films Taken	
			Average	Range
Community Zone Institutions	3,173,578	1,817	0.6	0.0 - 6.6
Mental Hospitals	6,749	16	2.4	1.2 - 3.5*
General Hospitals	410,801	429	1.0	0.4 - 1.6
Correctional Institutions	48,950	203	4.1	0.0 - 12.0
Industrial	285,160	136	0.5	0.0 - 4.4
Special Problem Groups				
Indians	4,830	26	5.4	0.0 - 17.6
Migrant Labor	3,616	20	5.5	5.0 - 7.0*
Schools	204,083	37	0.2	0.0 - 2.1

\*Less than 5 surveys

## RADIATION

The hazard of radiation exposure from chest x-rays has been widely publicized in recent months by press, radio and television. As the result of this publicity, in November 1957, the U. S. Public Health Service telegraphed the State Board of Health that "some versions in the press of the Public Health Service news release concerning mass x-ray surveys are misleading". The telegram emphasized the guiding principles that unify the policy of the Public Health Service as it bears upon tuberculosis x-ray case-finding activities. These principles are:

1. "Mass radiography of the chest, operated under competent auspices, is a fundamental technique in the detection of tuberculosis.
2. "Mass x-ray casefinding should be applied selectively in groups at high risk of tuberculosis infection and disease.
3. "All tuberculosis x-ray survey programs should have the prior approval of the applicable State or local health department.
4. "Consideration should be given to the tuberculin test as an initial screening device in low prevalence groups.
5. "Every community should evaluate on a continuing basis its tuberculosis problem, needs and resources, so that local x-ray surveys may have efficient use and maximum effect.
6. "Adequate safeguards should be utilized to protect all persons from unnecessary radiation."

The State Board of Health has been conscious of x-ray hazards for several years and has kept careful watch for unnecessary exposure to personnel. Protective measures have been taken as advised by the Public Health Service and such measures consist of aluminum filters, lead cones and new intensifying screens on x-ray apparatus and the installation, from time to time, of additional lead partitions on x-ray trailers. Our x-ray machines have been surveyed by the N. C. State Board of

Health, Occupational Health Section, and the report on each machine has been examined by a Nuclear Physicist, N. C. State College. This type examination will be a continuing procedure. Our technicians, for many years, have been required to wear film badges, which detect radiation while on duty. In the case of exposure by the technician such exposure is shown on the badge and these badges are examined weekly in the central office in Raleigh.

"The most important thing in understanding radiation hazards is to see them in their proper perspective. First it is vital for us to realize that radiation properly used represents a tremendous boon to mankind and it is to our advantage to encourage rather than discourage its use. It is also important for us to realize that in speaking of radiation we are speaking of a vast gamut of varying dosages which differ greatly in their significance and it becomes apparent that the radiation incident to good case-finding procedures is minimal and of little significance in comparison to the tremendous importance of case-finding results", (Dr. W. M. Peck, Chief Radiation Section, N. C. State Board of Health).

## DEATH AND CASE RATES

### 1956 Death rates and deaths

In 1956, 13,927 persons died from tuberculosis in Continental United States, or a death rate of 8.3 in every 100,000 population. In North Carolina in this year there were 272 deaths or a death rate of 6.2 in every 100,000 population and these figures show that the death rate in North Carolina is substantially lower than the United States as a whole. Thirteen states had a lower death rate in 1956 than North Carolina; none of these were southern states, two were east of the Mississippi River, namely New Hampshire and Wisconsin.

### 1957 Deaths

Death and death rates from tuberculosis for Continental United States have not as yet been compiled. In North Carolina there were 224 deaths or 48 less than in 1956. One hundred twenty-two white people died from tubercu-

losis or a death rate of 3.7 per 100,000 population and 102 for other races or a death rate of 9.0. The combined death rate was 5.1 per 100,000 population.

#### 1957 Cases

There were a total of 67,019 new active and probably active cases of tuberculosis reported for Continental United States in 1957 or a rate of 39.3 per 100,000 population. In this year 1,239 such cases were reported in North Carolina or a rate of 27.5 and again

the case rate in this State is substantially lower than the National rate.

Fifteen states had a lower case rate in 1957 than North Carolina; none of these were southern states and five are east of the Mississippi River, namely Wisconsin, Maine, New Hampshire, Vermont and Connecticut.

During the past 12 years there have been 7,608 deaths from tuberculosis in North Carolina and 21,116 active cases reported for the first time.

#### CASE AND DEATH RATES —

**NORTH CAROLINA 1918/50 to 1957 and part of 1958**

##### CASES

	No.	Rate	White	Rate	Other	Rate
1918	3514	139.3				
1950	3653	89.9	2072	69.5	1581	146.6
1951	3105	75.3	1870	61.6	1235	113.5
1952	2326	55.7	1346	43.7	980	89.4
1953	2001	47.4	1136	36.4	865	78.4
1954	2013	47.1	1088	34.4	925	83.3
1955	1950	45.1	1035	32.3	915	81.8
1956	1850	42.3	1034	31.9	816	72.5
1957	1651	37.4	890	27.1	761	67.1
1957						
5 mos.	859					
1958						
6 mos.	847					

##### DEATHS

1918	3412	135.3	1615	92.4	1797	232.1
1950	748	18.4	297	10.0	451	41.8
1951	630	15.3	264	8.7	366	33.6
1952	543	13.0	208	6.8	335	30.6
1953	402	9.5	157	5.0	245	22.2
1954	311	7.3	148	4.7	163	14.7
1955	258	6.0	122	3.8	136	12.2
1956	261	6.0	125	3.9	136	12.1
1957	224	5.1	122	3.7	102	9.0
1957						
5 mos.	95					
1958						
5 mos.	111					

#### ESTIMATE OF TUBERCULOSIS PREVALENCE IN THE UNITED STATES 1956 (From U. S. Public Health Reports)

"The prevalence of tuberculosis is the total number of cases on any one day. At the beginning of 1956, there were an estimated 250,000 active cases of tuberculosis in the United States. Of this number 150,000 or 60% were known to State and local health departments.

The rest of estimated number comprised unknown cases, that is currently unreported cases and a small number of previously reported but since lost to supervision.

"The estimates show that there also were 550,000 inactive cases. Of these 250,000 were known to health departments. The total number of active and inactive cases was estimated at 800,000.

"In addition, there was an estimated

1,200,000 persons who once had tuberculosis but who do not now require supervision according to State and local health department standards. Although

these persons do not now require public health supervision, they constitute a reservoir of potential cases susceptible to reactivation".

Total cases, 1956 estimates	—	800,000
Known	—	400,000
Unknown	—	400,000
Active cases	—	250,000
Known	—	150,000
Unknown	—	100,000
Inactive cases	—	550,000
Known	—	250,000
Unknown	—	300,000
Persons who once had tuberculosis but do not require health supervision in 1956	—	1,200,000
Total cases plus persons who once had tuberculosis	—	2,000,000

## SUMMARY

If present trends persist the number of clinical cases of tuberculosis will continue to decline both in Continental United States as well as in North Carolina. In Continental United States deaths have declined from 24,195 in 1952 to 13,927 in 1956 or 10,268. In North Carolina deaths have declined from 543 in 1952 to 224 in 1957 or 319. Active cases have decreased from 85,607 in 1952 in Continental United States to 67,019 or 18,588 during the period 1952-1957, and in North Carolina, these cases have decreased from 1591 to 1239 or 352 cases for the same period. There is, however, a disproportion between cases and deaths and the percentage decrease in cases is less than the decrease in deaths in North Carolina; decrease in cases 22%, decrease in deaths 58.7% for this five-year period.

For the 13-year period prior to the organization of the Tuberculosis Control Section, N. C. State Board of Health, there were a total of 29,516 new cases of tuberculosis and 23,181 deaths reported. For the 13-year period following the organization of the Tuberculosis Control Section there were 35,674 new cases and 8,852 deaths. Cases have increased by 20% due to better case finding and deaths have decreased by 61% due to better medical and surgical care.

It is of interest to note the high tuberculosis prevalence in the mid-1930's among young men. This was forcibly brought out in the Camp Dix, New Jersey, chest x-ray survey of Civilian Conservation Corps applicants. In this survey almost one applicant in every 100 examined was found to have active tuberculosis, and 1.01 in every 100 questionably active and 5 applicants in every 100 examined inactive tuberculosis. The group of young men surveyed at Camp Dix are now in the 40-50 age group.

In 1957-58 our Tuberculosis Control Section engaged in three interesting chest x-ray surveys namely, the predominantly rural survey of Pamlico County, an industrial survey and a rural-urban survey. These surveys have shown that emphasis in tuberculosis control must be placed on our rural population. To repeat, the survey of the rural population in the age group 20 years and over showed that 1.7 persons in every 1000 examined had active tuberculosis; 1 person in 7,500 in industry had active tuberculosis and 0.65 persons per 1000 in a rural-urban community.

Our efforts should be directed towards the eradication of tuberculosis and with the knowledge as to where the disease is most frequently found our emphasis will be placed on these locations.

**RESIDENT TUBERCULOSIS CASES BY COLOR WITH RATES PER 100,000  
POPULATION: NORTH CAROLINA AND EACH COUNTY, 1957**

Area	Total		White		Nonwhite		Area	Total		White		Nonwhite	
	No.	Rate	No.	Rate	No.	Rate		No.	Rate	No.	Rate	No.	Rate
North Carolina ..	1,651	37.4	890	27.1	761	67.2	Jones .....	12	108.5	5	84.4	7	136.2
Alamance .....	22	27.1	13	19.6	9	59.8	Lee .....	6	22.2	2	9.8	4	59.9
Alexander .....	7	45.6	7	49.1			Lenoir .....	23	46.6	10	35.6	13	61.1
Alleghany .....	2	24.9	2	25.7			Lincoln .....	8	26.8	7	26.7	1	27.7
Anson .....	5	19.5	3	22.7	2	16.2	McDowell .....	7	25.3	7	26.4		
Ashe .....	12	56.3	12	56.7			Macon .....	5	30.5	5	31.1		
Avery .....	5	37.9	5	38.3			Madison .....	5	26.2	5	26.5		
Beaufort .....	16	42.5	6	25.3	10	71.9	Martin .....	24	82.0	12	84.7	12	79.5
Bertie .....	12	45.1	2	19.8	10	60.6	Mecklenburg .....	60	26.1	29	16.6	31	56.6
Bladen .....	12	38.0	6	32.3	6	46.2	Mitchell .....	11	75.7	11	75.9		
Brunswick .....	5	24.1	1	7.8	4	50.5	Montgomery .....	7	39.0	5	36.1	2	48.7
Buncombe .....	69	50.8	50	41.3	19	129.8	Moore .....	12	34.6	7	26.8	5	58.3
Burke .....	20	39.6	18	38.3	2	56.1	Nash .....	58	92.0	24	66.5	34	126.2
Cabarrus .....	21	31.4	17	29.7	4	41.1	New Hanover .....	36	48.4	22	41.9	14	64.1
Caldwell .....	2	4.1			2	61.9	Northampton .....	12	42.1	2	20.5	10	53.3
Camden .....	1	19.7	1	31.2			Onslow .....	14	23.5	6	11.6	8	100.0
Carteret .....	7	26.4	5	21.3	2	65.5	Orange .....	16	37.5	6	18.2	10	102.7
Caswell .....	8	37.2	6	37.4	5	47.5	Pamlico .....	8	78.4	3	44.8	5	142.3
Catawba .....	15	21.7	14	22.1	1	16.9	Pasquotank .....	7	25.8	3	17.2	4	41.3
Chatham .....	5	19.3	3	17.1	2	24.1	Pender .....	5	26.4	3	31.4	2	21.3
Cherokee .....	8	44.7	8	45.6			Perquimans .....	3	31.7	2	40.1	1	22.3
Chowan .....	3	22.7	2	25.8	1	18.2	Person .....	22	92.1	6	38.9	16	189.4
Clay .....	7	122.5	7	123.7			Pitt .....	46	70.1	11	30.7	35	117.4
Cleveland .....	14	20.3	6	11.1	8	53.5	Polk .....	4	34.9	2	19.9	2	142.0
Columbus .....	11	20.3	8	22.7	3	15.8	Randolph .....	15	27.1	13	25.5	2	46.6
Craven .....	35	56.9	18	40.5	17	99.2	Richmond .....	11	26.4	6	20.2	5	41.9
Cumberland .....	61	49.5	36	39.5	25	79.2	Robeson .....	22	23.0	9	22.8	13	23.2
Currituck .....	3	51.4	2	48.7	1	58.1	Rockingham .....	18	25.8	16	28.5	2	14.6
Dare .....	2	40.5	2	43.2			Rowan .....	17	21.3	13	19.4	4	31.3
Davidson .....	17	24.8	11	17.8	6	88.8	Rutherford .....	15	32.0	11	26.5	4	74.7
Davie .....	1	6.3	1	7.3			Sampson .....	24	46.6	14	43.5	10	51.9
Duplin .....	26	61.8	10	38.3	16	100.5	Scotland .....	12	42.0	3	18.9	9	70.8
Durham .....	50	42.7	17	21.4	33	87.6	Stanly .....	10	24.8	8	22.4	2	44.8
Edgecombe .....	39	73.0	13	49.0	26	96.6	Stokes .....	7	33.8	7	36.8		
Forsyth .....	62	38.7	31	26.1	31	74.4	Surry .....	16	33.1	15	32.8	1	37.5
Franklin .....	11	34.3	9	53.5	2	13.1	Swain .....	4	48.3	3	44.6	1	64.5
Gaston .....	29	22.7	22	19.8	7	42.3	Transylvania .....	3	17.3	2	12.0	1	145.6
Gates .....	4	43.5	2	48.5	2	39.4	Tyrrell .....	1	21.4	1	39.5		
Graham .....	2	27.7	2	28.7			Union .....	6	13.6	5	14.5	1	10.3
Granville .....	8	23.8	2	10.6	6	40.7	Vance .....	10	29.7	3	16.2	7	46.4
Greene .....	12	68.0	2	22.1	10	116.0	Wake .....	48	30.8	27	23.8	21	49.6
Guildford .....	71	32.6	29	16.4	42	102.3	Warren .....	3	12.6			3	18.7
Halifax .....	52	87.1	20	76.9	32	94.9	Washington .....	11	79.7			11	184.5
Harnett .....	10	20.0	3	8.0	7	55.2	Watauga .....	10	54.0	10	54.4		
Haywood .....	14	35.3	11	28.3	3	381.2	Wayne .....	44	64.2	19	47.3	25	87.9
Henderson .....	9	26.1	7	21.6	2	99.0	Wilkes .....	8	17.1	6	13.6	2	75.5
Hertford .....	19	82.7	6	66.0	13	93.6	Wilson .....	36	62.5	14	40.2	22	96.7
Hoke .....	7	42.8	2	30.5	5	51.0							
Hyde .....	1	18.3	1	32.1									
Iredell .....	15	24.8	7	13.9	8	77.6							
Jackson .....	7	36.5	4	22.6	3	197.9							
Johnston .....	23	34.1	11	21.0	12	80.3	Yadkin .....	1	4.3	1	4.5		
							Yancey .....	9	57.5	9	58.2		

Source: Annual Report of Public Health Statistics Section, Part I, 1957

PHSS: 3-28-58

**RESIDENT TUBERCULOSIS DEATHS BY COLOR WITH RATES PER 100,000**  
**POPULATION: NORTH CAROLINA AND EACH COUNTY, 1957**

Area	Total		White		Nonwhite		Area	No.		Rate		No.		Rate		No.		Rate	
	No.		Rate		No.			Total		White		Nonwhite		Total		White		Nonwhite	
	226	5.1	122	3.7	104	9.2													
North Carolina	226	5.1	122	3.7	104	9.2	Jones	2	18.1					2	38.9				
Alamance	1	1.2			1	6.6	Lee	2	7.4					2	29.9				
Alexander							Lenoir	2	4.0			2	7.1						
Alleghany							Lincoln												
Anson	2	7.8	1	7.6	1	8.1	McDowell	2	7.2	1	3.8	1		2	86.4				
Ashe	2	9.4	2	9.4			Macon	2	10.5	2	10.6								
Avery							Madison	3	10.3	1	7.1	2		2	13.2				
Beaufort	1	2.7	1	4.2			Martin	6	2.6	4	2.3	2		2	3.6				
Bertie	2	7.5			2		Mecklenburg	2	13.8	1	6.9	1		2941.2					
Bladen	1	3.2	1	5.4			Mitchell												
Brunswick							Montgomery												
Buncombe	11	8.1	7	5.8	4	27.3	Moore	1	2.9	1	3.8								
Burke	4	7.9	2	4.3	2	56.1	Nash	4	6.3	2	5.5	2		2	7.4				
Cabarrus	2	3.0	2	3.5			New Hanover	3	4.0	2	3.8	1		2	4.6				
Caldwell							Northampton	2	7.0			2		2	10.7				
Camden							Onslow	2	3.4					2	25.0				
Carteret							Orange	3	7.0	2	6.1	1		1	10.3				
Caswell	2	9.3	2	18.3			Pamlico	3	11.1	2	11.5	1		2	10.3				
Catawba	2	2.9	2	3.2			Pasquotank												
Chatam							Pender												
Cherokee							Perquimans												
Chowan	1	7.6			1	18.2	Person												
Clay	2	35.0	2	35.4			Pitt	9	13.7	2	5.6	7		23.5					
Cleveland	2	2.9	1	1.9	1	6.7	Polk	1	8.7	1	10.0								
Columbus	3	5.5	1	2.8	2	10.5	Randolph	2	3.6	2	3.9								
Craven	3	4.9	2	4.5	1	5.8	Richmond	2	4.8	2	6.7								
Cumberland	2	1.6	1	1.1	1	3.2	Robeson	4	4.2	2	5.1	2		2	3.6				
Currituck	1	17.1			1	58.1	Rockingham	1	14.4	1	1.8								
Dare							Rowan	3	3.8	2	3.0	1		1	7.8				
Davidson	2	2.9	1	1.6	1	14.8	Rutherford	3	6.4	3	7.2								
Davie	1	6.3	1	7.3			Sampson	5	9.7	2	6.2	3		2	15.6				
Duplin	2	4.8	1	3.8	1	6.3	Scotland	1	3.5			1		1	7.9				
Durham	4	3.4	2	2.5	2	5.3	Stanly	2	5.0			2		2	44.8				
Edgecombe	7	13.1	3	11.3	4	14.9	Stokes	1	4.8	1	5.3								
Forsyth	15	9.4	8	6.7	7	16.8	Surry	4	8.3	3	6.6	1		1	37.5				
Franklin							Swain	1	12.1	1	14.9								
Gaston	4	3.1	3	2.7	1	6.0	Transylvania	1	5.8	1	6.0								
Gates							Tyrrell												
Graham	1	13.8	1	14.3			Union												
Granville	1	3.0			1	6.8	Vance												
Greene	1	5.7			1	11.6	Wake	16	10.3	7	6.2	9		2	21.2				
Guilford	9	4.1	3	1.7	6	14.6	Warren	1	4.2			1		1	6.2				
Halifax							Washington	2	14.5			2		2	33.5				
Harnett	2	4.0	1	2.7	1	7.9	Watauga												
Haywood	2	5.0	2	5.1			Wayne	2	10.2	3	7.5	4		2	14.1				
Henderson	1	2.9	1	3.1			Wilkes	3	6.4	3	6.8								
Hertford	2	8.7	1	11.0	1	7.2	Wilson	5	8.7	4	11.5	1		1	4.4				
Hoke							Yadkin	1	4.3			1		1	95.5				
Hyde							Yancey	3	19.2	3	19.4								
Iredell	5	8.3	2	4.0	3	29.1													
Jackson																			
Johnston	6	8.9	2	3.8	4	26.8													

Source: Annual Report of Public Health Statistics Section, Part II, 1957  
 PHSS: 9-12-58

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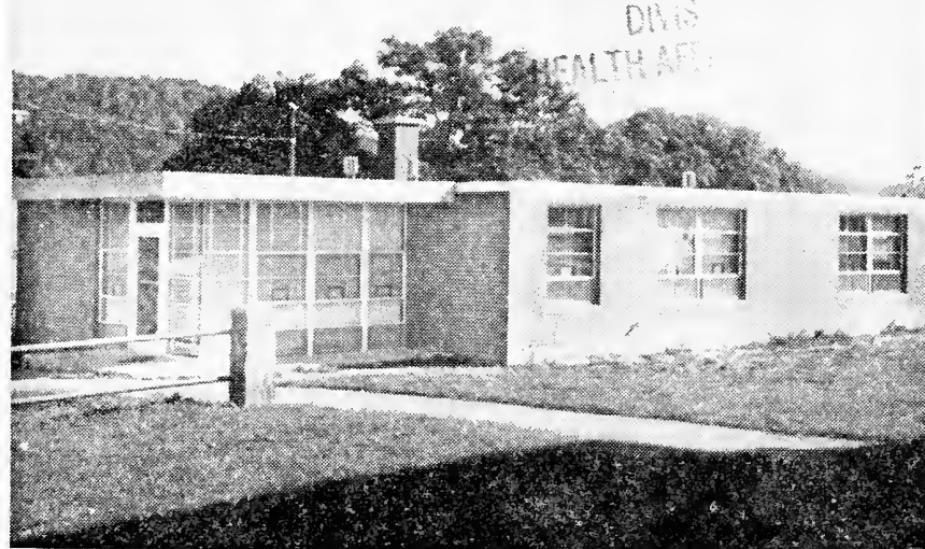
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List of free health literature will be supplied by local Health Departments or on written request.

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# THE NORTH CAROLINA TB ASSOCIATION'S REPORT TO THE PEOPLE

BY C. SCOTT VENABLE,

Executive Director North Carolina Tuberculosis Association

Many agencies use the medium of an annual report to relate to their stockholders an account of the activities engaged in during the year. For the stockholders of the NCTA you, the people, who have demonstrated your interest in tuberculosis control through your support of the Christmas Seal Sale and the many hours of volunteer service rendered, we thus highlight the NCTA program for 1957-58.

Since the early decades of the voluntary tuberculosis movement, voluntary agencies have held a unique position in tuberculosis control activities. As Dr.

Charles D. Eatman, NCTA President stated it, "Operating under a mandate from the people, TB associations are free to pioneer in new approaches to the tuberculosis problem and to demonstrate those that prove effective. This perhaps will continue to be their greatest asset since the indications are that the present TB control program is not the answer to TB eradication."

Capitalizing on this freedom, tuberculosis associations in the beginning, when tuberculosis was rampant, concentrated their efforts on education and organization of the public to meet

the immediate problem. This line of attack has not been abandoned. The associations were fighting then what has been described as "a holding action against TB." Today it is mandatory that we hold the line of advancement made against the disease and at the same time explore the unknowns to contribute to fundamental knowledge about it and the germ that causes it.

What are some of these unknowns with regard to tuberculosis? At the present time your contributions through the Christmas Seal Sales are helping to sponsor projects seeking answers to questions such as these:

How can resistance be built up in the body that has been infected by tubercle bacilli?

What is the chemical composition of the tubercle bacillus and what roles do these chemical components play?

How do TB drugs work?

How do the lungs and heart function in patients with TB and other respiratory diseases, compared with their function in normal individuals?

It is this lack of basic information about tuberculosis that establishes research as a universal priority need in tuberculosis control and elicits the emphasis that the NCTA ascribes to research in its 1957-58 program. That local associations recognize this need also is shown in their gratifying response to the NCTA appeal for additional funds to support critical North Carolina research projects. Because of their support, obligations to the Pamlico County-wide tuberculin testing pilot study were met. They also contribute generously to the support of the Research Department of the North Carolina Sanatorium System, where a promising vaccine made from an avirulent strain of tubercle bacilli is being tested. Both projects continue to make progress.

In **case-finding** our program emphasis was directed to what is known as the selective approach. "Look for TB Where You Are Most Likely to Find It" was the theme of the Associa-

tion's promotional efforts. Studies have shown that by X-raying the admissions to general hospitals, more cases of tuberculosis are found than through some other methods. A promotional leaflet to be used in emphasizing the need for routine X-ray programs in general hospitals based on this knowledge was prepared. Mass X-ray surveys and special surveys among high incidence groups were encouraged according to the needs in individual areas. In addition to this, the use of the tuberculin test as a screening device was stressed. Through proper channels, continuous periodic tuberculin testing among school children was recommended.

An attempt was made through NCTA's health education program to stimulate co-workers, agencies and individuals to act against TB and other health problems by keeping them supplied with accurate up-to-date information regarding these problems. Available mass media, form letters, NTA publications and face-to-face communication were employed in this effort, as were our annual meeting, training institutes and workshops.

To help overcome widespread misconceptions about TB, NCTA participated in an "Are You Positive?" campaign promoted by the National TB Association in which a motion picture produced in full color animation was used to spearhead the effort. The Forsyth County TB Association received a citation from the NTA for outstanding participation.

The area of special interest in school health was in-service teacher training. On request, consultants for parent and teacher health education programs and workshops were provided for public schools and colleges: college teachers were provided TB and health materials and students attending North Carolina's three medical schools were given "Diagnostic Standards in TB." A special point was made of informing local TB workers of attractive federal fellowships now available for post-graduate training.

The annual Institute on Problems in Tuberculosis Control held at Saluda,

N. C., continued to exert influence in the rehabilitation field. The Institute is co-sponsored by the NCTA and seven other North Carolina agencies. It gives health, welfare, rehabilitation and TB workers throughout the southern states an opportunity to learn the latest trends and methods in TB control and ways of working together smoothly for the benefit of the TB patient. The other co-sponsors are the Schools of Public Health, Social Work and Medicine of the University of North Carolina, the North Carolina State Boards of Health and Welfare, the North Carolina Division of Vocational Rehabilitation and the North Carolina Sanatorium System.

Local TB units were urged to form rehabilitation committees to explore ways of working with other community agencies to meet the needs of their TB patients and responded to an appeal for funds to help start a homemakers' course at N. C. Sanatorium at McCain.

Woven through this brief report is the fact that tuberculosis control is a cooperative undertaking participated in by individuals, groups and agencies,

official and voluntary. The truth that, after many years of concentrated co-operative effort, there are still many unknowns testifies that tuberculosis is one of the most baffling diseases known to man.

Voluntary tuberculosis associations in their attack against this baffling menace use funds contributed voluntarily through the annual Christmas Seal Sale. The 1957 North Carolina Christmas Seal Sale produced \$491,795.98 for local, state and national TB association work. This total does not include \$3,576.36 raised on four military installations which, for bookkeeping reasons, must be included in the 1958 Seal Sale.

The 101 local TB units retained from 75 to 80 per cent of the total Seal Sale receipts. The NCTA received from 14 to 19 per cent. Six per cent, of which 1 per cent is earmarked for research, went to the National TB Association.

Listed below are the amounts expended to carry out the 1957-58 program activities of the North Carolina Tuberculosis Association:

#### INCOME

1956 Christmas Seal Sale	\$107,460.58
Less participation in National Program	*30,562.11
Interest earned on bonds and deposits	1,862.50
Sundry Income	958.81
<b>TOTAL INCOME</b>	<b>\$ 79,719.78</b>

#### EXPENDITURES BY SERVICE

Health Education and Information	\$25,338.47
Rehabilitation	7,344.63
Administration	10,626.74
Seal Sale	20,047.52
Field and Organization and Promotion of Case-Finding	18,849.57
<b>TOTAL EXPENDITURES</b>	<b>\$ 82,206.93</b>

\*Includes 1 per cent for research

When listed as specific items, the NCTA financial statement shows a disbursement of \$40,625 on professional salaries: \$16,054 on clerical salaries; \$11,259 on travel; \$1,417 on publications, news letters, printing, and dissemination of information. Other budgeted items were expended for training institutes, program conferences, the NC-

TA annual meeting, scholarships, payment on and maintenance of the NCTA headquarters, telephone, postage and express, dues and subscriptions, office supplies and equipment, repairs, audit, insurance and bonding, bank exchange, social security, health insurance and annual physical examinations for employees.

## Possible Mental Health Program And Objectives Of A County Health Department

By Benjamin M. Drake, M.D., M.P.H., Director

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In planning any program for the prevention of any specific disease or group of diseases, it is essential to know certain facts concerning the disease. In the absence of this knowledge, only a very general type of prevention can be undertaken.

However, it is helpful to have available some type of information which might be obtained from community sources. For example, the number of cases and types of mental illness arising in the community each year and the disposition of these cases (home care, private institution or state institution) is the beginning of an epidemiologic study of the illness. In the absence of knowledge of a specific cause, the means of prevention must of necessity be very general.

North Carolina, being aware of the problem, has made a start toward prevention by the establishment of regional mental health centers. There have been many difficulties encountered in this program, primarily due to shortage of qualified personnel to staff the clinics. Even after staffing, only a limited number of persons can be served in the clinics because of the nature of the disease and the lack of knowledge of preventive measures. In terms of normal health department operation, the cost of service to each individual is quite high. However, this is due to the fact that "mass production" methods cannot be applied and that treatment of any mental illness is an individualized procedure and is quite slow—Involving all of the several disciplines employed in the centers.

In view of the lack of specific knowledge and the relatively high per patient cost of presently accepted preventive measures and in view of the fact that prevention of mental illness has come to be accepted as a responsibility of the health department, (in

conjunction with other community agencies) it becomes necessary to examine the situation to ascertain: (1) What is being done in the routine activities of the department, (2) What can be done to promote better mental health with the presently available resources, and (3) What might be done to add resources from rather limited budgets that would expand and improve the picture in prevention of mental illness.

Lemkau<sup>1</sup> in the section on mental hygiene in Rosenau's textbook stated, "Mental hygiene is the effort to prevent or change attitudes which are or are believed to be inimicable to the best possible state of health for the individual or group concerned." He also points out that "mental hygiene is concerned with public health programs at every point since practically all programs have an element of attitude changing about them." He then proceeds to point out how good mental health techniques may be used by every person in the health department in his contacts with each other and with the recipients of his services.

Applewhite<sup>2</sup> in an address before the health officers of the North Carolina Public Health Association emphasized the above and pointed out three steps in the development of a sound community mental health program. These are: (1) Mental health orientation of the health department personnel, (2) Organization and indoctrination of "index people" of the community, and (3) establishment of a mental health clinic.

It should be noted that the primary emphasis of both of these men is on the role of the usually employed health department personnel and not on those who have been especially trained in the field. Possibly, this is due to the scarcity of such people, but it is more probably due to the fact that people in the

health departments are oriented to the community concept of preventive medicine and, in general, are an accepted part of the community.

In viewing the average health department in the light of the above, it may be seen that contributions to the promotion of mental health are being made or may be made by the entire staff. The receptionist in greeting the public and answering questions has her role. The sanitarian in "selling" an improvement in the community environment, the nurse in her contact with the prenatal, the new mother, the pre-school and school child, and the chronically ill, the director in his contacts with community officials, voluntary and official agencies, the general public, and especially with his staff—all can and do influence the attitudes and thus the mental health of the community.

More specifically, there have been certain activities of health departments which have contributed to the reduction of certain definite causes of mental illness. The most outstanding have been in the reduction of psychosis due to pellegra and central nervous system syphilis. There is, and should be, a "holding operation" in every health department against these two diseases by means of education of the public in nutrition and in the continuous case finding and early treatment of syphilis.

All of the above may be definitely categorized as either a promotion of better mental health or as prevention of a specific mental disease.

Unfortunately, lacking specific knowledge of the causes of the more prevalent mental disorders, the health department personnel must largely devote its efforts to an overall promotion of good mental health. However, no department which is really interested in preventing mental illness should stop there. Several types of activity could be investigated and tried which would help to prevent some persons from becoming mentally ill and in addition add to the sum total of specific information about mental illness.

Examples of this type of activity may

be found in several health departments in the State. In one, the classroom teachers in the schools are requested to report to the public health nurse behavioral or emotional "problem children" in their rooms. The nurse begins a file on each child and accumulates as much information as possible. In the health department, these data are assembled so that there may be overall knowledge of the number of "problem children". Follow-up by the nurses and the personnel of the regional mental health centers may aid in correcting the situation before it becomes a major problem. In addition, this particular activity has the possibility of being expanded into a long range epidemiologic study of these children.

In several other health departments, there has recently been started a cooperative project with the mental hospital and the welfare departments in which the homes of all new admissions to the hospital are visited by the public health nurse and there is an attempt to interpret the illness and its implications to the family. When a patient returns home from the hospital, the nurse also visits the home and tries to aid both the patient and the family in adjusting to the new situation. This is a new program in this State, and at present, is in the trial stages. However, it is hoped that it may help in several ways. The reestablishment of the patient in the home and the community, the rehabilitation of the patient, and hopefully the prevention of a recurrence of the disease are all benefits which may be derived from this program.

Considering the limited resources and budgets available to most health departments, what can be done to add resources that would improve the program of preventing mental illness?

In accordance with the National Mental Health Act, the North Carolina State Board of Health has been designated as the mental health authority in North Carolina. The Mental Health Section is the administrative unit in charge of the program. According to the plans of this Section, ten regional mental health centers have been desig-

nated, each of these centers serving nine counties. The personnel of the centers consists of one or more teams composed of a psychiatrist, a psychologist and two psychiatric social workers. With the present work load and waiting list, it is impossible for these workers to "stretch" themselves any thinner. One possible means of helping the counties who are without the clinic might be to obtain funds (either from the state authority, from the local board of commissioners, or from a voluntary agency) and hire a person either a psychologist, a social worker, or a mental health nurse to help the county. This worker could act as a field representative of the center, spending a stated amount of time in the county. In this manner, health department, welfare department, school, and other personnel could be given a planned orientation in mental health, special problems could be studied and a closer liaison maintained between the clinic and the areas served.

Another possible method of doing the same thing might be for two or more counties to join forces and hire such person without the funds being handled by the Mental Health Center. This worker would function in a similar manner and be closely identified with the Center. However, he should be directly responsible to the counties instead of the clinic director.

The building up of the staff of the Section of Mental Health by the addition of at least a psychiatrist and a psychologist would be of help. Of course, it would be essential for these people to actually get into the area without the clinics and help them with staff and community education projects and in other areas where a rather limited consultation would be needed.

A final possibility would be the allocation of local funds to pay mental health personnel from the university centers who would serve the counties as above on a part-time consultation basis.

Anyone or any combination of the above mentioned possibilities would serve as a first step in a community

mental health program and as the problem becomes more specifically defined, attempts could be made to secure additional funds and personnel to meet the needs.

In conclusion, the problem of mental illness in the community and the means of preventing mental illness has not been defined to the point that specific preventive measures can be taken. In the absence of this, the community, through its agencies can make an attempt to learn the size of the problem. It may also begin or continue a very general program of promotion of good mental health. Finally, it can begin one or more programs of limited scope, utilizing present personnel and resources or by the addition of full or part-time personnel who have had training in the field of mental health. In so doing, the community will at least make a beginning toward the prevention of what is apparently one of the most outstanding problems in the health of the community.

<sup>1</sup> Maxcy—Rosenau's "Preventive Medicine and Hygiene"—Appleton-Century-Crofts, N. Y., Seventh Edition, 1950.

<sup>2</sup> Applewhite, C. C.—North Carolina Health Bulletin, Vol. 72, Page 2, 1957.

#### **CERVICAL "SMEAR" TEST MAY BE NEEDED ONLY EVERY TWO YEARS**

Routine "smear" examinations for cervical cancer may not be needed any oftener than every two years, a new Wisconsin study has suggested.

If a woman shows no sign of cancer after a cervical smear test and a thorough physical examination, she will probably remain free of cancer for at least two years, three Milwaukee researchers said.

"If these observations can be substantiated the application of the cytological examination will become greatly simplified, since it need not be repeated as often as has been recommended in the past," they said in the *Journal of the American Medical Association*.

They based their conclusions on a study of 15,389 women during a three-year period and on their impressions

covering a seven-year period.

In the smear technique, introduced in 1943 by Dr. G. N. Papanicolaou, material is taken from the cervix and examined microscopically for abnormal cells.

It has been recommended that all women undergo a cervical smear test at least once a year and perhaps as often as every six months.

One of the major problems with the use of the technique is the lack of persons trained to examine the smears. This problem would be somewhat solved if women had to have the examination only every two years, the authors said.

They discovered that the percentage of women showing signs of cervical cancer decreased each year of the study because many of the women were having repeat examinations. The cancers that were found were mainly in women undergoing their first examination.

The authors of the report are Beverly Schulz, B. S., David J. Carlson, M.D., and Edward A. Birge, M.D., of the Milwaukee Hospital.

#### **RULES LISTED FOR PROTECTING CHILDREN FROM SEX PERVERTS**

Nearly all sex offenders have one characteristic—timidity—that furnishes the most promising way to protect children from them, according to an American Medical Association publication.

Because the sex criminal is usually timid, he will leave a child alone if he is resisted by the child at the outset of an encounter. Seldom will he pursue a girl or boy unless the child goes along with what is suggested.

Thus the child must be taught to resist firmly but politely all invitations from strangers, Beatrice Schapper, New York City, said in *Today's Health*.

Teaching children to avoid situations that play into the hands of sex perverts is "one of the most delicate jobs parents face. But if you remember that sex offenders are generally timid, the job becomes less difficult," the article said.

Most important is to make certain

that children have a home where they feel loved, understood, and safe. Then they will come to their parents with anything out of the ordinary.

Children learn without harm other safety rules from their parents, and they can be taught to be cautious with strangers without being told all the horrible things that could happen.

For instance, a parent can combine admonitions such as "Look to the left and then to the right before starting across the street, and don't get in a car with a stranger."

The article listed some rules based on the recommendations of authorities and suggested that families work out their own list, expressing them in the youngster's own words. They are:

—Children should be told to report to parents, teachers, a policeman, store-keeper or other older persons any stranger who:

1. Asks a child to go anywhere with him—to a car, a private home, a movie, or for a walk. The child should say "no" politely and firmly.
2. Tries to talk with a child or touch him or his clothes in a theater. The child should tell an usher.
3. Tries to join children's games outside. Again, the man should be told "no" firmly but politely.
4. Offers candy or toys or a job with pay.

—Children should write down the license number of any stranger's car if the man invites them into the car. If they have no paper or pencil, the number can be scratched with a stick in the dirt or with a stone on the sidewalk.

—If children see the same man several times near the playground or along the street and he starts talking to them, they should tell him they want him to meet their teacher or parents. If he refuses, he should be reported.

—Children should be told not to play near public toilets, to stay with other children, to avoid playing in alleys or deserted buildings, and to take a pal along to the playground, church, movie, or store.

—Children should not go out alone

late at night, not even in their own back yard.

—Any change in plans should be discussed with the parents over the telephone.

—Parents should never send a message via a stranger to a child at school or on a playground.

—If a driver attempts to push or pull a child into his car, the child should resist and run as fast as he can to the nearest store or house.

When a child has been involved in an unsavory incident, parents should never punish, shame, or frighten the child.

Miss Schapper said to parents: "Keep calm; don't jump to conclusions. By becoming upset, you may do the child more harm than the actual encounter. To react with disgust, fear, or hysteria may color permanently a child's attitude toward sex . . . The child may need just to talk out his experience."

Specialists report that most incidents, when properly handled, tend to be forgotten in time.

#### ANNOUNCEMENT

April 2-3, 1959—8th Southern Municipal and Industrial Waste Conference, University of North Carolina, Chapel Hill, North Carolina. The conference is also sponsored by Duke University and North Carolina State College. Technical sessions will feature "Solids Separation Processes," "Chemical and Biological Treatment" and "Solids Handling and Disposal." For information write to Dr. Daniel A. Okun, Department of Sanitary Engineering, School of Public Health, University of North Carolina, Chapel Hill.

#### EXPANSION OF AIR POLLUTION INSTRUCTION AT UNIVERSITY OF NORTH CAROLINA

The Department of Sanitary Engineering School of Public Health, of the University of North Carolina has initiated a course plan in air pollution at the graduate level. This is incorporated into curricula leading to three degrees at the master's level; Master of Science in Sanitary Engineering, Mas-

ter of Science in Public Health, and Master of Public Health, and for those who demonstrate capability is part of a plan for advanced study leading to the Doctor of Philosophy.

The Graduate Administrative Board of the University has established three new courses offered this academic year in air hygiene and air pollution control under Dr. Lynman A. Ripperton. These courses are "Fundamentals of Air Hygiene," "Effects and Measurements of Air Pollution," and "Control of Air Pollution." These may be combined with courses in occupational health and industrial hygiene to prepare for professional development in those phases of environmental health. Laboratory facilities and equipment for student work and for individual research have been greatly increased.

Initiation of this program was made possible through a Community Air Pollution Training Grant to the University of North Carolina by the U. S. Public Health Service. There are graduate assistantships, traineeships, and staff positions available for qualified persons. Inquiries should be to Professor Emil T. Chanlett, Department of Sanitary Engineering, School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

#### RADIOLOGICAL HEALTH SEMINAR

On January 26 through 28, 1959, the Department of Sanitary Engineering of the University of North Carolina and the North Carolina State Board of Health will conduct their Fifth Annual Seminar on Radiological Health. Laboratory and seminar sessions will be supplemented by formal instruction by outstanding speakers from the national agencies engaged in nuclear energy control and by members of the faculty of the University. The instructional objectives of the seminar will be to provide the bases for the operational activities of control agencies and the means for developing administrative leadership in this urgent environmental health need. Information on these sessions may be secured from Professor Emil T. Chanlett, Department of Sanitary Engineering, School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

tary Engineering, School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

### **NEW GUIDE TO MEASURE VISUAL IMPAIRMENT PUBLISHED**

A set of uniform standards for measuring visual loss and its effect on a person's ability to perform daily activities has been published by the American Medical Association.

For years doctors and laymen have tried to answer the questions: How does a visual deficiency influence a person's ability to live a normal life? How can the degree of impairment of this ability be measured?

The new guide "seeks to provide a simplified method for determining visual impairment and the extent of its effects on an individual's ability to perform the activities of daily living," according to an editorial in the A.M.A. Journal, in which the guide appears.

It is the second one prepared by the A.M.A. Committee on Medical Rating of Physical Impairment. The first, published in February, dealt with the back and extremities. Others will deal with the cardiovascular system, respiratory conditions, and other body systems.

The editorial explained that diminished visual ability is expressed as a percentage of impairment of the visual system and as a percentage of impairment of the "whole man." Using these values, the physician has a practical means for expressing and calculating the extent of permanent impairment.

The doctor's responsibility is to evaluate a patient's impairment—not his disability.

Impairment is a purely medical condition and is the basic consideration in evaluation of permanent disability. Disability is defined as a situation in which a person's actual or presumed ability to engage in gainful activity is reduced or absent because of impairment.

The guide was prepared by the committee, which is headed by Dr. Raymond M. McKeown, Coos Bay, Ore., with the assistance of three consultant

ophthalmologists. They are Drs. Ralph W. Danielson, Denver; Charles E. Joeckle, East Orange, N. J., and Harold G. Scheie, Philadelphia.

### **HIP BURSITIS DESCRIBED IN A.M.A. JOURNAL**

Pain in the lower back and legs may actually be "bursitis of the hip" and not sciatica, according to a Texas orthopedist.

The same condition, medically called the trochanteric syndrome, may be treated in the same way as bursitis of the shoulder, Dr. Morton H. Leonard, El Paso, said in the *Journal of the American Medical Association*.

Bursitis, a general term for several disorders, usually means the inflammation of the fluid-filled sacs that act as pads between tendons and bones.

In the trochanteric syndrome, the bursae and tendons near the trochanter major are affected. The trochanter major is a projection from the thigh bone near where it joins the hip bone.

As in shoulder bursitis, the usual cause of the trochanteric syndrome is the wear and tear of everyday use, Dr. Leonard said. It is not so common or so well known as bursitis of the shoulder.

The onset is frequently sudden, with pain on the side of the hip extending down the back and side of the thigh. Pain may be referred to the lower back. Local tenderness in the region is constant. If there are calcium deposits in the area, a low-grade fever may occur.

Treatment may include X-ray therapy, diathermy, puncture of the affected bursa, and surgical removal of calcium. Dr. Leonard has also found that injections of the steroid hydrocortisone acetate into the affected part also help.

### **THE NATIONAL FOUNDATION HEALTH SCHOLARSHIPS**

The National Foundation, in an unprecedented effort to help overcome the critical shortage of personnel in the health field, has announced a multimillion dollar scholarship program designed to assist students of

medicine, nursing, physical therapy, occupational therapy, and medical social work. This will be a first step in its new expanded program.

The present scholarship and fellowship program will be continued but modified and expanded where necessary. This program over the years has added over 7,600 especially trained people to those prepared to work in research and patient care.

The new Health Scholarship Program will encourage a younger age group to select a career in one of the professions at a time when they are looking to their future full of idealism and the desire to be of service in the world.

Shortages in the health field are not new to members of the health professions, but because shortages have increased the workload on each individual, there has been little time to take these problems to the public in an effective way.

The axiom that "only when people make some kind of financial sacrifice for their schools do they take an active and wholesome interest in education," applies not only to public, but to professional schools.

Under The National Foundation's new program, a means to create community interest in the health professions is at hand. There are 3,100 county chapters consisting of community-alert volunteers. In addition to the basic objective of adding more qualified personnel and in cooperation with the five professions concerned, three additional specific objectives are sought:

- (1) to stimulate interest in all of the health professions, but specifically in medicine, nursing, physical therapy, occupational therapy and medical social work
- (2) to gain awareness and community understanding of the problems that contribute to the ever-increasing shortages of personnel in the health fields; and
- (3) to encourage cooperation and understanding among the five professions concerned in making their professional talents available to the communities in the

solution of these personnel problems.

At the press conference held to announce the new program, Basil O'Connor, president, summarized the new program as follows:

The National Foundation will offer annual Health Scholarships to help provide four years of college or university education in career preparation for five of the key professions: medicine, medical social work, nursing, physical therapy and occupational therapy.

A minimum of 505 Health Scholarships will be offered each year, the first of them before the end of the 1959 school year. They will be made available on a geographic basis with heavily populated states receiving as many as 25—or five for each of the five professions—and with no state or territory receiving less than five Health Scholarships, a minimum of one for each of the five professions. The National Foundation's chapters, numbering more than 3,100, will have an active part in the program. They will seek and accept Health Scholarship applications, pass them on to state or territorial professional committees, for selection and will present awards to winners.

Health Scholarships will be made available to student citizens of the United States in each of the 49 states, the District of Columbia, Hawaii and Puerto Rico.

Over the next 10 years this program will cost at least \$12,000,000. Each scholarship awardee will receive \$500 a year for four years, or a total of \$2,000 — providing that scholastic standards are maintained. The 505 Health Scholarships each year will cost over one million dollars.

Because education requirements of the five professions vary, scholarships will be made available in

**Nursing, physical therapy and occupational therapy**, to all graduating high school students who have been accepted for an approved program by accredited colleges or universities;

**Medical social work**, at the college junior year, extending through two years of required graduate work; and in

**Medicine**, at the college junior, senior or first graduate year, depending upon the requirements of the medical school.

Awards, taking financial need and scholastic achievement into consideration, will be made by state and territorial committees composed of members of the five health professions.

Renewals and payments for the second, third and final years of the

scholarships will be contingent upon satisfactory progress.

Scholarship money need not be limited to tuition but may be used to cover any appropriate student expense. Students may accept other scholarship funds, providing The National Foundation is informed of the source and amount.

Winners of scholarships are not committed to work in health fields of special interest to The National Foundation, such as polio, arthritis or birth defects. Scholarship recipients are, however, expected to serve the health field at large, working in areas for which they are prepared.

#### TABLE OF SCHOLARSHIPS ADJUSTED TO POPULATION

Population	Number of States	Number of Scholarships per State	TOTAL
Over 8,000,000	4	25	100
6,000,000-8,000,000	3	20	60
2,800,000-6,000,000	12	15	180
Up to 2,800,000	33	5	165
	<hr/> *52		<hr/> 505

\* Includes District of Columbia, Hawaii & Puerto Rico

#### DISTRIBUTION OF SCHOLARSHIPS ADJUSTED TO POPULATION

4 States receiving 25 annual scholarships	(5 in each health profession)
1. Illinois	3. California
2. Pennsylvania	4. New York
3 States receiving 20 annual scholarships	(4 in each health profession)
5. Michigan	
6. Texas	
7. Ohio	
12 States receiving 15 annual scholarships	(3 in each health profession)
8. Kentucky	12. Virginia
9. Minnesota	13. Wisconsin
10. Alabama	14. Georgia
11. Tennessee	15. Indiana
33 States and Territories receiving 5 annual scholarships	(1 in each health profession)
20. Nevada	31. New Mexico
21. Alaska	32. Utah
22. Wyoming	33. Arizona
23. Delaware	34. Rhode Island
24. Vermont	35. Dist. of Columbia
25. Hawaii	36. Maine
26. New Hampshire	37. Colorado
27. Idaho	38. Nebraska
28. Montana	39. Oregon
29. North Dakota	40. Kansas
30. South Dakota	41. Arkansas
	42. West Virginia
	43. Connecticut
	44. South Carolina
	45. Mississippi
	46. Puerto Rico
	47. Oklahoma
	48. Maryland
	49. Washington
	50. Iowa
	51. Louisiana
	52. Florida







